STIC-Biotech/ChemLib





From: Sent: To:

Whiteman, Brian Friday, April 18, 2003 10:19 AM STIC-Biotech/ChemLib

Subject:

seq search

09/729,264 11/26/00 Welcher et al.

search seq id nos 1, 3, and 5 against us patent and us patent application databases. search seq id nos 2, 4, and 6 against us patent and us patent application databases.

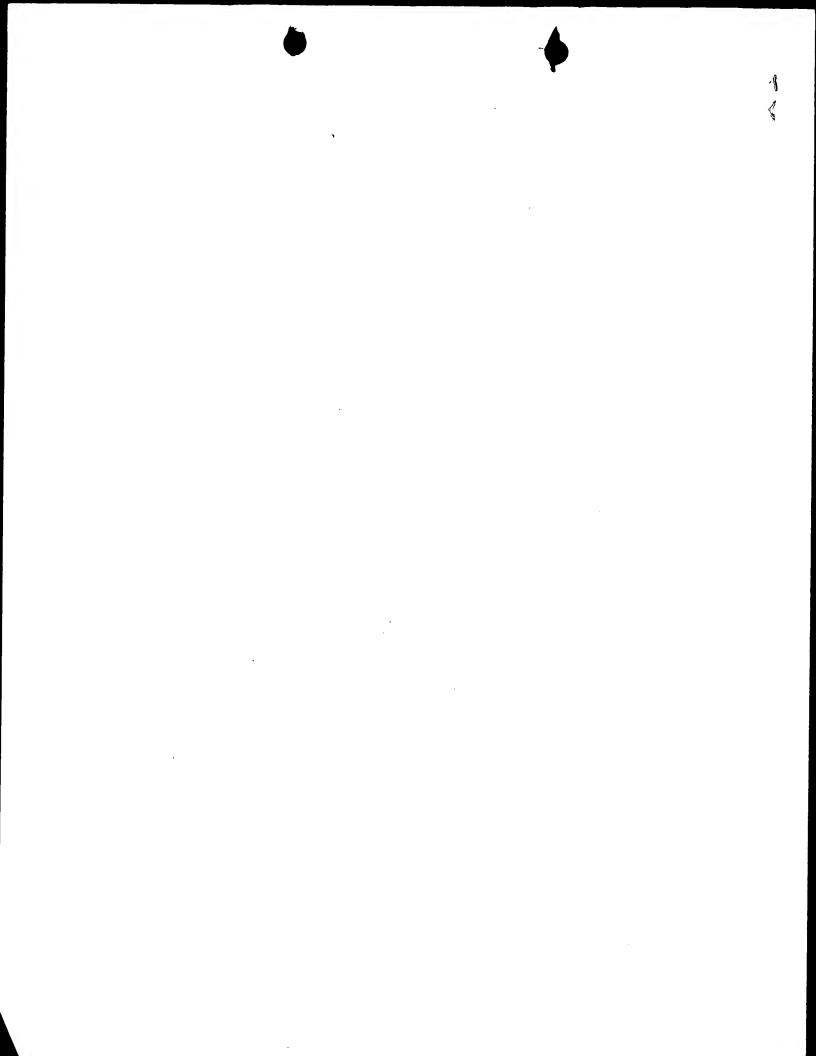
Thanks, Brian Whiteman, 11e12 Patent Examiner - Art Unit 1635 United States Patent and Trademark Office Crystal Mall 1, 11A16 (703) 305-0775

> Mary Jane Ruhl Tech. Info. Specialist, STIC TC-1600 CM-1, Room 6A-06 Phone: 605-1155

Searcher:	
Phone:	
Location:	
Date Picked Up:	
Date Completed: 4/30/03	
Searcher Prep/Review:	
Clerical:	
Online time:	

TYPE OF SEARCH:
NA Sequences:
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Other:

/ENDOR/COST (wh	ere applic.)
STN:	
DIALOG:	
Questel/Orbit:	
DRLink:	
Lexis/Nexis:	
Sequence Sys.:	
www/Internet:	
Other (specify):	



Wed Apr 30 10:00:21 2003

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
                                                                                                                                                                                                                                                                          Minimum DB seg length: 0
Maximum DB seg length: 2000000000
                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                   post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 28, 2003, 16:24:32; Search time 36.7435 Seconds (without alignments) 2142.147 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-729-264-2
2059
                                                                                                                                                                                                                                                                                                                                          671580 segs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                      1 MGLVIFLHGSGSGNEVIEGP......HPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                   Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                 Maximum Match 1008
Listing first 45 summaries
                                                                                                                                                                                                        SPTREMBL_21:*
                                                                        10:
                                                                                                                                                                                 sp_bacteria:*
                                                                                                                                                                                            sp_archea:*
                                                                                                                                              sp_invertebrate:*
                                                                                                                                                                      sp_fungi: *
        sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                                                          sp_organelle:*
                                                                                                                      sp_mhc:*
                                                                                                                                   sp_mammal:*
                                                                                                                                                          sp_human:*
                                                                     sp_rodent:*
                                                                                 sp_plant:*
                                               sp_vertebrate:*
                                                          sp_virus:*
sp_archeap:*
```

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

1 2 3 3 4 4 4 6 6 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Result
1694 575.5 141.6 136.5 135.3 132.5 132.5 132.5 132.5 129.5 127.5 127.5 127.5 127.5	Score
0.000000000000000000000000000000000000	Query Match Length DB
315 270 168 173 1496 1427 344 697 697 164 315 344 344 371 871 881	ength DI
111 111 111 111 113 113 113 111 111 111	1
Q9DBG2 Q9DBG2 Q9DBY2 Q9D4K2 Q9DF61 Q9DF61 Q9DBP0 Q2204B Q2204B Q2204B Q2204B Q3DG15 Q3	ID
	1

Oydey was musculu Oydels mus musculu Oydels mus musculu Oydelk mus musculu Oydelk mus musculu Oydels xenopus lae Oydes xenopus lae Oydes gallus gall Oydeb mus musculu Oyzel mus musculu Oyzel gallus gall Oydej gallus gall Oydej mus musculu Oydej mus musculu Oydej mus musculu Oydels mus musculu Oydels mus musculu Oydels mus musculu Ofles mus musculu Ofles mus musculu Ofles mus musculu Ofles mus musculu	Description Ognsi5 homo sapien

114 114 114 114 114	18 125.5 6.1 20 125.5 6.1 20 125.5 6.0 21 123.5 6.0 22 123.5 5.9 24 122.5 5.9 25 122.5 5.9 26 120 5.8 27 120 5.8 28 120 5.8 28 120 5.8 29 119 5.7 31 117.5 5.7 31 117.5 5.7 31 116.5 5.6 36 116 5.6 37 115.5 5.6	127 6
56 139 139 267	313 313 13 66632 5 C C C C C C C C C C C C C C C C C C	1445 11 869 4
044924 drosophili 09w213 drosophili 096sc3 homo sapi	Q95gyl caenorhabdi O01761 caenorhabdi O01761 caenorhabdi O99121 homo sapien O996a2 homo sapien O986a2 homo sapien O986a2 homo sapien O91370 drosophila O99174 drosophila O97174 drosophila O97174 drosophila O97174 drosophila O97174 drosophila O97174 drosophila O97174 drosophila O96647 homo sapier O02838 sus scrofa O02838 sus scrofa O02838 sus scrofa O017362 caenorhabd O94011 drosophila O91011 drosophila O94011 drosophila	Q63155 rattus norv Q15146 homo sapien Q57596 yallus gall

```
RESULT 1
Q9NSI5
                                                                           RA HATTORIAM, FUJIYAMA A., Taylor T.D., Watanabe H., Yada T., Park H.S.,
RA TOYOda A., Ishli K., Totoki Y., Choi D.K., Soeda E., Ohki M.,
RA TOYOda A., Ishli K., Totoki Y., Choi D.K., Soeda E., Ohki M.,
RA Takagi T., Sakaki Y., Taudien S., Blachschmidt K., Polley A.,
RA Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,
RA Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.,
RA Rosenthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S.,
RA Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.E.,
RA Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.E.,
RA Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.E.,
RA Ramser B., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
RA Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E.,
RA Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E.,
RA Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F.,
RA Lehrach H., Reinhardt R., Yaspo M.L.;
Lehrach H., Reinhardt R., Yaspo M.L.;
RA Shimitad (MAY-2000) to the EMBL/GenBank/DDBJ databases.
RA Shimitad (MAY-2001) to the EMBL/GenBank/DDBJ databases.
RA Shimitad (MAY-2001) to the EMBL/GenBank/DDBJ databases.
RA Shimitad (MAY-2003) in J., HIMMANNAM 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT 2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9NSI5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human).
Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IGSF5 protein (Fragment).
IGSF5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                         NON_TER
                                                                  PROSITE; PS00022; EGF_1; UNKNOWN_1.
  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                315 AA;
                                       315
                                       315
                34599 MW; B69DCB23570FA3D1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  315 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     en di
jen
odi
jen
jen
jen
jen
julu
la
la
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a a en
```

```
AR Kawal J., Shinagawa A., Shibata Y., Komono H., Adachi J., Fukuda S.,
A Arakawa T., Hara A., Fukunishi Y., Komono H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schrimm L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schrim L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.F.,
RA Gustincich S., Hill D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N. H.,
RA Nordone P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hayashizaki Y.; Voshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                              Strausberg R.;
Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AK008060; BAB25436.1;
EMBL; BC004806; AAH04806.1;
MGD; MGI:1919308; 2010003D20R1k.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
2010003D20R1k protein (RIKEN CDNA 2010003D20 gene).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241 MILTPTCTLTIRCCCCRRRCGGCNCCCRCCFCCRKRGFRIQFQKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250 MILTPTCTLTIRCCCCRRCCGCNCCGCRCCFCCRKRGERIQFQKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181 CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     190 CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 ENEPCEVTCLPSHWTRLPDISWELGLIVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130 ENEPCEVTCLDSHWTRLPDISWELGLLVSHSSYYFVPEDSDLQSAVSILALTPQSNGTLT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 SQRYDQGGNETSEMITHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70 SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 SGSGNEVIEGPQNATVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRET 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 SGSGNEVIEGPQNARVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
.ia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                    annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y. RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Ra Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., RA Kadota K., Matsuda H.A., Ashburner M., Battalov S., Casavant T., Ra Fleisschmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Ra Fleisschmann W., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Ra Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Ra Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Ra Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Ra Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Ra Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Ra Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Ra Sasaki H., Toyo-oka K., Wang K.H., Weilz C., Whittaker C., Wilming L., Ra Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                       RP
RC
RX
RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ··· Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9D9I2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DR
DR
DR
SQ
                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. STRAIN-C57BL/60; TISSUE-TESTIS; MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Endmaila; Eutheria; Rodentia; Sclurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4931420D14RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9D9I2;
Q9D9I2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243 KHOPGPATHPRVSFDIASPOKVRNVTLV 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355 QRPPRPASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185 NWRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     298 KEKTUK---ETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRAD 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140 IILLAVAFSLLLILIIVLIIIFCCC------CASRREKEESTYONEIRKSA 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241 KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSE 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR003599; Ig.
InterPro; IPR003006; Ig_MHC.
SMART; SM00409; IG; 1.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
SEQUENCE 270 AA; 29604 MW; A39C273DAA950DFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72 PIITNNRFTYASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ----- 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVOVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12 LVILAQLTASGSSYQIIEGPONVTVLKDSEAHFNCTVTHGWKLLMWTLNOMVVLSLTTQG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 LVIF--LHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28.0%; Score 575.5; DB 11; Length 270; 35.1%; Pred. No. 2.3e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73; Indels 137; Gaps
```

STRAIN-C57BL/6J; TISSUE-SMALL INTESTINE; MEDLINE-21085660; PubMed-11217851;

SEQUENCE FROM N.A. NCBI_TaxID=10090; Eukaryota, Metazoa; Mus musculus (Mouse).

SEQUENCE FROM N.A.

Nature 409:685-690(2001).

RESULT 2

Q9D8G2; Q9D8G2

PRELIMINARY;

PRT;

270 AA.

g γ Ъ δÃ B Ş Ъ

δÃ В 밁

Matches Query Match

roca I

Similarity

82.3%; 99.7%;

Conservative

0; Mismatches

Score 1694; DB 4; Length 315; Pred. No. 2.6e-146;

```
SQ DR RT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                            RY SURJECTION WITH STRAIN-C57BL/63; PubMed=11217851; RX MEDILINE=2108560; PubMed=11217851; RX MEDILINE=2108560; PubMed=11217851; RX MEDILINE=2108560; PubMed=11217851; RX MEDILINE=2108560; PubMed=112861; Xonno H., Adachi J., Fukuda S., RA Arakawa T., Shinagawa A., Shibata K., Konno H., Kasukawa T., Saito R., RA Arakawa T., Hara A., Fukuhishi Y., Konno H., Kasukawa T., Saito R., RA Arakawa T., Cayawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., RA Kadota K., Matsuda H.A., Gojobori T., Bono H., Kasukawa T., Saito R., Ratsuda H.A., Gojobori T., Bataloy S., Casavant T., RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., RA Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., RA Nordone P., Ring B., Ringwald M., Fodriguez I., Sakamoto N., Storch K.-F., Satoki H., Satok K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., RA Sasaki H., Satok K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                   δÃ
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nature 409:685-690(2001).;
EMBL; AK006892; BAB24782.1;
MGD; MGI:1913992; 4931420014Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                  Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                256 CTLTIRCCCCRRRCCGCNC-CCRCCFCCRKRGER----IOFQKKSEKEKTNKETETESG 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9D4K2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9D4K2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 311 NENSGYNSDEOKTTDTASLPPKSCESSDPEORNSSCGPPHQRADQRPPRPASHPQASFNL 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4931420D14RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             166 AS 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           112 LTRSQLELIEPE--PTMALEPSEITVAFFSHKNANVSDP----EEVPPCLDSDPFPNGDL 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55 CSLSRSCCCCRCRCC-CHCRCCRC--CCSRSRRFRSRTTLKFFQITEXGEQSLQRRIRRQ 111
                                                                                                                                                          "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AKO16467; BAB30253.1; -.
MGD; MGI:1913992; 4931420014Rik.
SEQUENCE 173 AA; 19581 MW; 147B6F155AC29FDF CRC64;
                                   256 CTLTIRCCCCRRRCCGCNC-CCRCCFCCRKRGFRIQFQKKSEKEKTNKETETESGNENS 314
55 CSLSRSCCCCRCRCC-CYCRCCRC--CCSRSRRFRSRTTLRVRDPKFFQ--ITEKGEQSL 109
                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                     40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168 AA; 18931 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.8%; Score 141;
32.0%; Pred. No. 5
                                                                                                      6.6%; Score 136.5; DB 1
31.5%; Pred. No. 0.00014;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 5.3e-05;
                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7A2BD279612A5E94 CRC64;
                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     173 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49; Indels
                                                                                                                                      DB 11; Length 173;
                                                                                                52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 168;
                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14; Gaps
                                                                                                                                                                                                                                                                                                                                  Wilming L.,
                                                                                                      19;
                                                                                                    Gaps
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
  TARES SOON OF THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation updat
MYELOBLAST KIAA0230 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q92626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             315 GYNSDEOKTTD-----TASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQ 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              092626;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110 ORRIRRQLTRSQLELIEPEPTMALEPSEITVAFFSHKNANVSDP----EEVPPCLDSDPF 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The coding sequences of 80 new genes (KIAAO201-KIAAO280) deduced analysis of cDNA clones from cell line KG-1 and brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nagase T., Seki N., Ishikawa K., Ohira M., Kawarabayasi Y., Ohara O., Tanaka A., Kotani H., Miyajima N., Nomura N.; Prediction of the coding sequences of unidentified human genes. VI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          166 PNGDLAS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366 ASFNLAS 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Assignment of a human melanoma associated gene MG50 (D2S448) to chromosome 2p25.3 by fluorescence in situ hybridization."; genomics 22:243-244(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Weiler S.R., Taylor S.M., Deans R.J., Kan-Mitchell J., Mitchell M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-MELANOMA;
MEDLINE-95048383; PubMed-7959781;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Res. 3:321-329(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cytolytic T lymphocytes.";
submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases
EMBL; D86983; BAA13219_1; ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitchell M.S., Kan-Mitchell J., Minev B., Edman C., Deans R.J., "Identification of a novel melanoma gene (MG50) - likely the gene for IL-1 receptor antagonist - which encodes epitopes recognized by human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                           InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR002007; Anim_peroxidase.
InterPro; IPR003598; I9_c2.
InterPro; IPR003006; I9_MHC.
                                                                                                                      PRINTS; PR00457; ANPEROXIDASE.
SMART; SM00408; IGC2; 4.
SMART; SM00082; LRRCT; 1.
                                                                                                                                                                                                   Pfam; PF001463; LRRCT; 1. pfam; PF00093; VWC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR000483; LRR_Cterm.
                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                 Ptam;
                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                     SMART; SM00013; LRRNT; 1.
SMART; SM00369; LRR_TYP; 4.
SMART; SM00214; VMC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001611; LRR.
                            PROSITE;
Immunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E=BONE MARROW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P05164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF200348; AAF06354.1; -.
                                                                                                                                                                                                                                                                    PF00560;
                                                                                                                                                                                                                                                                                                                       PF03098;
                                                                                                                                                                                                                                                                                                                                           IPR003591; LRR_typ. IPR001007; VWF_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                               PS01208; VWFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                 IPR000372; LRR_Nterm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1CXP
                                                                                                                                                                                                                                                                       ig; 4.
LRR; 5.
                                                                                                                                                                                                                                                                                                                 An_peroxidase; 1.
                                                                                                           LRRCT; 1.
LRRNT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1496 AA
```

```
밁
                                                                                                                                                  Matches
                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                             SWART; SM00060; FN3; 6.
SWART; SM00408; IGC2; 3.
SWART; SM00410; IG_11ke; 2.
Immunoglobulin domain; Repeat.
SEQUENCE 1427 AA; 156533 MW; 61FEA12C8A67497.2 CRC64;
243 LORPSNVVAIEGODAVLECAVS-GYPTPTIVWMQGD-----EPVPIRTR----KYS 288
                                                                                                                                                                                                                  InterPro; IPR003006; Ig_MHC Pfam; PF00041; fn3; 6. Pfam; PF00047; 19; 4. PRINTS; PR00014; FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                             InterPro; IPR003962; FnIII_repeat.
InterPro; IPR003961; FN_III.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                               "Expression of a homologue of the deleted in colorectal cancer (DCC) gene in the nervous system of developing Xenopus embryos.";
Dev. Biol. 166:654-665(1994).
EMBL; U10986; AAA70168.1; -...
                            17 IEGPONATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 74
                                                                                                                                                                                                                                                                                                                                                                                                                             Pierceall W.E., Reale M.A., Candia A.F., Wright C.V., Cho K.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-95113183; PubMed-7813784;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q91562 PRELIMINARY; PRT; 1427 AA. 991562; O1-NOV-1996 (TrEMBLrel. 01, Created) O1-NOV-1996 (TrEMBLrel. 01, Last sequence update) O1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=8355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumor suppressor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XDCCA.
                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         567 GEPEPAITWINDGVQVTESGKFHISPEGFLTINDVGPADAGRYECVARNTIG 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     233 GFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----RCCCCRRRCCG 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515 -GQYECQAV--NIIGSQKVVAHLIVQPRVTPVFASIPSDTTVEVGANVQLP-----CSSQ 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185 NGTLTCVATWKSLKARKSATVNLTV-----IRCPQDT----GGGINIPGVLSSLPSL 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             459 RVVIEGOTVDFQC-EAKGNPPPVIAWTKGGSQLSVDRRHLVLSSGTLR--ISGVALHDQ- 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126 LVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSTLALTPQS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          412 -----GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAFIIVQALPQFTVTPQD 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354 GSPARPTEVIQPONTEVLYGESVTLECSATGHPPPRISWTRGDRTPLEVDPRVNITPS-- 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68 FTSORYDOGGNETSEMITHNVEPSDSGNIRCSLONS--RLHGSAYLTVOVMGELFIPSVN 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 GSGSGNEVIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDR 67
                                                                                  59;
                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1496 AA; 167209 MW; E9B9A7069BF1ABFF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative 36; Mismatches 127; Indels
                                                              6.5%; Score 133; DB 13; Length 1 25.7%; Pred. No. 0.0046; ative 33; Mismatches 90; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.6%; Score 135; DB 4; Length 1496; 25.0%; Pred. No. 0.0032;
                                                                                              DB 13; Length 1427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56; Gaps
                                                            Gaps
                                                              13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
```

```
DЬ
                                                                                                                   Ωy
                                                                                                                                                        DЪ
                                                                                                                                                                                     Qy
                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
232 GASVGQKGILQCEASAVPVAEFQ---WFKEDTRLA 263
                               217 GGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA 247
                                                          177 QGFVSEDEYLE----ITGITREQSGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKNT 231
                                                                                             162 YYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQDT 216
                                                                                                                              129 H----LIVQVPPQIVNISSDITVNEGSSVTLMCLAFGRPE-----PTVTWR----HLSGKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00047; 19; 3
SMART; SM00409; IG; 3
SMART; SM00408; IGc2; 3
SMART; SM00410; IG_11ke; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-0.499204; PubMed=11042360;
Lodge A.P., Howard M.R., McNamee C.J., Moss D.J.;
"Co-localisation, heterophilic interactions and regulated expression of IgLON family proteins in the chick nervous system.";
Brain Res. Mol. Brain Res. 82:84-94(2000).
BRBL; AF29234; AAG01877.1; -
INTERPO.; IPR00359; Ig.
InterPro; IPR00359; Ig.
InterPro; IPR003500; Ig_like.
                                                                                                                                                               106 HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                       Immunoglobulin domain.
SEQUENCE 344 AA; 37531 MW; 37FE6051CBF0E7B4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                80 DKWSIDNRVVILSN---TKTQY-----SIKIHNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                 55 ---SVRPMEPIITNDRFTSQRKDQGGNFTSEMIIHNVEPSDSGNIRGSLQ-----NSRL 105
                                                                                                                                                                                                                                                                   21 LLFLVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCTVDDRVRRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
0BCAM alpha 1 isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                    4 VIFLHGSG----SGNEVI-EGPONATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---- 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9DF61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9DF61
                                                                                                                                                                                                                                                                                                                                                                         TocaT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398 YQCIAENEAGNIQTYAQLIIPDPAVPSSSILPSAPRDV-----VPVLVSS 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188 LTCVA-----TWKSLKARKSATVNLTVI-RCPQDTGGGINIPGVLSS 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  347 DIEFECAVSGKPS-----PTVKWTKNGEVVIPSDYFQIVDGSNLR----ILGLVKSDEGY 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133 PCEVTCL----PSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   289 VLGG--SNLLISNVTDDDAGAYTCVATYKNENTSFSADLTVMVPPQFLNHPANLYAYESM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    75 QGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                                                       70;
                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                             6.4%; Score 132.5; DB 1
25.5%; Pred. No. 0.00081;
                                                                                                                                                                                                                                                                                                                                   38; Mismatches 104; Indels 63; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         344 AA
                                                                                                                                                                                                                                                                                                                                                                        DB 13; Length 344;
                                                                                                                                                                                                                                                                                                                                     16;
```

```
RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Besole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml I.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml I.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazazarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weltz C., Whittaker C., Wilming L.,
RA Hayashiraki V.,
RA Hayashiraki V.,
                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                       밁
Ş
                                       밁
                                                                          Q
                                                                                                                      멍
                                                                                                                                                           Š
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O9DBPO:

01-JUN-2001 (TrEMBLrel. 17, Created)

01-JUN-2001 (TrEMBLrel. 17, Last sequence update)

01-JUN-2002 (TrEMBLrel. 21, Last annotation update)

solute carrier family 34 (sodium phosphate), member 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9DBP0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=LUNG; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
EMBL, AK004832; BAB32600.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003841; Na_Pi_cotrans. Pfam; PF02690; Na_Pi_cotrans; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:1342284; Slc34a2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                        436 FTSAMTPLIGIGVISIERAYPLTLGSNI------GTTTTAILAALASPGNT--LRSSL 485
                                                                                                                                                                                                                                                                                                                                                                                                                                                       382 MIVKLLGS-----VLRG-QVATVIKKTLNTDFPFPFAWLTGYLAILVGAGMTFIVQSSSV 435
                                                                                                                      567 LLVLCLRMLQFRCPR-----ILPLKLRDWNFLPLWMHSLKPWDNV------ISLATTC
                                                                                                                                                                                                                                              151 --WELGILVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLT
311 NENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASFNL
                                                                                257 TLTIRCCCCRRRCCG-----CNC-CCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESG 310
                                                                                                                                                             209 VI-----RCPQDTGGGINIPGVL---SSLPSLGFSLPTWGKVGLGLAGTMLLTPTC 256
                                                                                                                                                                                                      525 YRW---FAVFYLIFFFFVTP-----LTVFGLS-----LAGWPVLVGVGVPIILLL 566
                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QNSRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLP------DIS-- 150
                                                                                                                                                                                                                                                                                                                                                                                                                WKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSL 100
                                                                                                                                                                                                                                                                                            QIALCH---
                                         -FQRRCCCCCRVCCRVCCMVCGCKCCRCSKCCR--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGR01013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           697 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; 2a58; 1.
76244 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                              ---FFFNISGI---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.4%; Score 131; DB 11; 20.6%; Pred. No. 0.0028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2A7B9384857EF16F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 123;
                                                                                                                                                                                                                                                                                                -----LLWYPIPFTRLPIRLAKGLGNISAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  697 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 168;
                                                    ---- DQG
                                                    648
                                                                                                                                                                                                                                                                                                    524
                                                                                                                                     613
                                                                                                                                                                                                                                                           208
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9Z290
                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                      Б
                                                                                                                                                                  8
                                                                                                                                                                                                      B
                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Type IIb Na/phosphate-cotransporter.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9Z290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 expressed in mammalian small intestine."; proc. Natl. Acad. Sci. U.S.A. 95:14564-14569(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-NMRI; TISSUE=SMALL INTESTINE; MEDLINE=99045724; PubMed=9826740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLC34A2 OR NPT2B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               686 LSMKALSNTTV 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003841; Na_Pi_cotrans
Pfam; PF02690; Na_Pi_cotrans; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc. Natl. Acad. Sci. U. EMBL; AF081499; AAC80007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biber .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hilfiker H., Hattenhauer O., Traebert M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                371 ASPEKVSNTTV 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TIGRFAMS; TIGR01013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGD; MGI:1342284; Slc34a2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Characterization of a murine type II sodium-phosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           382 MIVKLLGS-----VLRG-QVATVIKKTLNTDFPFPFAWLTGYLAILVGAGMTFIVQSSSV 435
                                                                                                                                                                                                                                                                                                                                           486
                                                                                                                                                                                                                                                                                                                                                                          101 QNSRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLP------DIS-- 150
                                                                                                                                                                                                                                                                                                                                                                                                          436 FTSAMTPLIGIGVISIERAYPLTLGSNI------GTTTTAILAALASPGNT--LRSSL 485
                                                                                                                                                                                                                                                                        525 YRW---FAVFYLIFFFFVTP-----LTVFGLS-----LAGWPVLVGVGVPIILLL
                                                                                                                                                                                                                                                                                                       151 --WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLT 208
                                                                                                                                                                                                                                      209 VI------RCPQDTGGGINIPGVL---SSLPSLGFSLPTWGKVGLGLAGTMLLTPTC
                                                                                                 311 NENSGYNSDEOKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASFNL 370
                                                                                                                                   614 -FQRRCCCCCRVCCRVCCMVCGCKCCRCSKCCR-
686 LSMKALSNTTV 696
                                371 ASPEKVSNTTV 381
                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 LVIFLHGSGSGNEVIEGPQNATVLK-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EE-----EEEKEQD---IPVKASGAFDNAAMSKEC---
                                                                                                                                                                                                                                                                                                                                       QTALCH-----FFFNISGI------LLWYPIPFTRLPIRLAKGLGNISAK 524
                                                                                                                                                                                                                                                                                                                                                                                                                                          WKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSL 100
                                                                                                                                                                   TLTIRCCCCRRRCCG-----CNC-CCRCCFCCRKRGFRIQFQKKSEKEKTNKETETESG 310
                                                                                                                                                                                                      LLVLCLRMLQFRCPR-----ILPLKLRDWNFLPLWMHSLKPWDNV-----ISLATTC
                                                                EE----EEEKEQD---IPVKASGAFDNAAMSKEC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                697 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.4%; Score 131; DB 1: 20.6%; Pred. No. 0.0028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; 2a58; 1.
76286 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   51; Mismatches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     839E5CCB0F565265 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Forster I., Murer H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----GSQARFNCTVSQG 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ----QDEGKGQVEV 685
                                                                           -QDEGKGQVEV 685
                                                                                                                                                                                                                  613
                                                                                                                                                                                                                                                   256
```

23;

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                         Q9DGI5;
TISSUE-BRAIN;
Lodge A.P., McNamee C.J., Howard M.R., Reed J.E., Moss D.J.;
"Characterisation of CEPU-Se, a secreted isoform of the IgLO
protein CEPU-1.";
                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                 01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence of the control of
                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                 Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                               CEPU-SE
                                                                                                                                                                                                                                                                                               CEPU-Se alpha 1 isoform
                                                                                                                                                  NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   273 --NCCC-RCCFCCR 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR001450; 4Fe4S_ferredoxin.
InterPro; IPR001271; Defensin_mammal.
InterPro; IPR000561; EGF-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caenorhabditis elegans.
Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102 CRTCCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; Z66499; CAA91301.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q22048
Q22048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             213 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         investigating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Genome sequence of the nematode C.elegans: A platform for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T01B7.8 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1996 (TrEMBLrel.
01-NOV-1996 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58 KRQGGCGCGCGC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 LAILLAIGTFIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gating biology.";
282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00022;
PS01208;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1. PS00269; DEFENSIN; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001007; VWF_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  164 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 01, TrEMBLrel. 01, TremBLrel. 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EGF_1; UNKNOWN_1.
VWFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16499 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.3%; Score 129.5; DB 5
32.1%; Pred. No. 0.00058;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Caenorhabditis
                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C002D48D36C9FCED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GCCGCGGGGGG- *CGCCCRPRCCCCCRRCCTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                         315 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  164 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
          IgLON family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
Query Match
Best Local Similarity
Matches 66; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q99PJ0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Дδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR003508; Ig_c2.
InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_MHC.
Pfam; PF00047; ig; 3.
SMART; SM00409; IG; 3.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                           nervous system.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AF282980; AAK00276.1; -.
                                                              Immunoglobulin domain.
SEQUENCE 344 AA; 37924 MW;
                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                   STRAIN=ICR; TISSUE=BRAIN;
                                                                                                                                                                                                                                                                                                                                                                                            Q99PJO;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last seq
01-DEC-2001 (TrEMBLrel. 19, Last ann
                                                                                                                                                                                                                                                      Kim T.H., Choi S.C., Kim J. "Cloning and expression of
                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                InterPro; IPR003599; Ig.
                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                           Neurotrimin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q99PJ0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00409; IG; 3.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233 VPVGQKGILMCEASAVPSADFQ---WYK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           218 GGINIPGVL----SSLPSLGFSLPTWGK 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 GFISEDEYLE----ITGITREQSGEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKSTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQDTG 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128 VH----LIVQVSPKITEISSDISINEGGNVSLTCIA---TGRPDPTITWR----HISPKAV 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases EMBL; AF292936; AAG01879.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immunoglobulin domain
seouence 315 AA; 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81 KWCLDPRVVLLANTKTQYSIQ------IHDVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51 MVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 LLFLVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCSVDNRVTRVAWLNRSSILYAGND 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARENCTVSQ-----GW---KLIMWALSD 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR003599;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                  6.2%; Score 127.5; DB 25.3%; Pred. No. 0.0023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.2%;
                                                                                                                                                                                                                                                                   Kim J., Jeon J.W., Kim K.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34606 MW;
                                                                                                                                                                                                                                                 mouse neurotrimin gene in the developing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41;
                                                                                                                                                                                                                                                                                                                                                                                                 Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 127.5; DB Pred. No. 0.0021;
                                                              3ECC6D5EE6C5C17D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68C5D27F0DDC6FB2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            344 AA
                              DB 11; Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13; Length 315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
```

Conservative

39;

Mismatches

109;

Indels

47;

Gaps

14;

Ş 밁

밁 Š В

20 밁 Š

RESULT 13

093242

```
01-NOV-1998 (TrEMBLrel. 08, Created)
01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPS 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           170 DLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGINIPG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130 -LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR---HISPKAVGFVSEDE 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kimura Y., Shirabe K., Fukushima M., Takeshita M., Tanaka H.; "CEPU-1: an Immunoglobulin Superfamily Molecule, Has Cell Adhesion Activity and Shows Dynamic Expression Patterns in Chick Embryonic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              225 VL----SSLPSLGFSLPTWGK 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185 YLQ----IQGITREQSGEYECSAS-NDVAAPVVPRVKVTVNYPPYFSEAKGIGVPVGQKG 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Interpro; IPR003006; Ig_MHC. pfam; PF00047; 1g; 3. SMART; SM00408; IGC2; 2. SMART; SM00410; IG_like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
EMBL, AB011810; BAA31514.1; .
InterPro; IPR003598; Ig_C2.
InterPro; IPR003600; Ig_11ke.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240 TLQCEASAVPSAEFQ --- WFK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75 --PYAGNDKWCLDPRVVLLGNTQTQYSIEIQNVDVYDEGPYTCSVQIDNHPKTSRVH--- 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59 MEPIITNDRF-TSQRYDQGGNFTSE--MIIHNVEPSDSGNIRCSLQ-----NSRLHGSA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21 LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTTDNRVTRVAWLNRSTI----- 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRP 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mmunoglobulin domain
                                      178 GFISEDEYLE----ITGITREOSGEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKSTG 232
                                                                             163 YEVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IRCPQDTG 217
                                                                                                                    128 VH----LIVQVSPKITEISSDISINEGGNVSLTCIA---TGRPDPTITWR---HISPKAV 177
                                                                                                                                                           105 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSSY 162
218 GGINIPGVL----SSLPSLGFSLPTWGK 241
                                                                                                                                                                                                  81 KWCLDPRVVLLANTKTQYSIQ-----IHDVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                                                                                                                                                                         51 MVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 104
                                                                                                                                                                                                                                                                                                                         4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARENCTVSQ-----GW---KLIMWALSD 50
                                                                                                                                                                                                                                                                                    LLFLVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCSVDNRVTRVAWLNRSSILYAGND 80
                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                344 AA; 37613 MW; 22CAA8F526A6B57E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                     6.2%; Score 127.5; DB 25.4%; Pred. No. 0.0023;
                                                                                                                                                                                                                                                                                                                                                                           41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344 AA.
                                                                                                                                                                                                                                                                                                                                                                                                               DB 13; Length 344;
                                                                                                                                                                                                                                                                                                                                                                               98; Indels 61; Gaps
                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                  밁
                                                                                                                                                                                       δÃ
                                                                                                         QY
                                                                     В
                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q61987;
Q61987;
                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-MYOBLAST;
MEDLINE-95349951; PubMed-7624144;
MEDLINE-95349951; PubMed-7624144;
Ganju P., Walls E., Brennan J., Reith A.D.;
"Cloning and developmental expression of Nsk2, a novel receptor
"Cloning and developmental expression of Nsk2, a novel receptor
tyrosine kinase implicated in skeletal myogenesis,.";
tyrosine kinase implicated in skeletal myogenesis,.";
concogene 11:281-290(1995).
Oncogene 11:281-290(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nsk2 protein precursor. MUSK OR NSK2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPR003598;
Interpro; IPR003600;
Interpro; IPR003006;
Interpro; IPR002290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233 VPVGQKGILMCEASAVPSADFQ---WYK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR001245; Tyr_pkinase.
Pfam; PF01392; Fz; 1.
Pfam; PF00047.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE: PS50038; FZ; 1.

PROSITE: PS00107; PROTEIN_KINASE_DOM; 1.

PROSITE: PS500101; PROTEIN_KINASE_ST; 1.

PROSITE: PS60108; PROTEIN_KINASE_ST; 1.

PROSITE: PS00109; PROTEIN_KINASE_TR; 1.

PROSITE: PS00128; TUBULIN_B_AUTOREG; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR002453; Beta_tubulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:103581; Musk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00408; IGc2; 2.
SMART; SM00410; IG_like; 1.
SMART; SM00219; TYIKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pfam; pF00047; ig; 3.
pfam; pF00069; pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000719; Euk_pkinase.
InterPro; IPR000024; Fz_domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATP-binding; [mmunoglobulin domain; Serine/threonine-protein kinase;
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal; Transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                              184 SNGTLTCVAT----WKSLKARKSATVNLTVIR------CPODTGGGINIPG-----V 225
                                                                                                                                                  172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
                                                                                                                                                                                                                                122 KITRPPINVKIIEGLKAVLPCTIMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
                                                                     224 TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                              129 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                                                                                                                                                                                       15 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 73
                                                                                                                                                                                       74 DQGGNFTSEMIIHNVEPSDSGNIRCSLONSRLHGSAY----LTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X86444; CAA60165.1; -. P11362; 1FGK.
                                                                                                                                                                                                                                                                                                                     70;
                 871 AA; 97047 MW; F3C53DC6AFE702AB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                        6.2%; Score 127.5; DB 21.7%; Pred. No. 0.0077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig_like.
                   1::111::
                                                                                                                                                                                                                                                                                                                         41; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 871 AA.
                                                                                                                                                                                                                                                                                                                                                                      DB 11; Length 871;
                                                                                                                                                                                                                                                                                                                                      87; Gaps
```

AC DAR REPORT OF REPORT OF

NCBI_TaxID=9031;

Ş

Query Match Best Local (Matches

68;

16;

SEQUENCE

밁 Š 멍

8 망

밁 δÃ

```
δÕ
                                                             Db
                                                                                      δÃ
                                                                                                                                                                          Matches
                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
Q61988
                                                                                                                                                                                                                               Prodom; pD000001; Euk_pkinase; 1.

SMART; SM00408; IGC2; 2.

SMART; SM00408; IGC2; 2.

SMART; SM00410; IG_like; 1.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50038; FZ; 1.

PROSITE; PS500107; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00108; PROTEIN_KINASE_ST; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    οy
V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR002453; Beta_tubulin.
InterPro; IPR000719; Euk_pkinase.
InterPro; IPR000719; Er_domain.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003500; Ig_like.
InterPro; IPR003060; Ig_MHC.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003290; Ser_thr_pkinase.
InterPro; IPR003245; Tyr_pkinase.
                                                                                                                                                           SEQUENCE 881 AA; 98435 MW; EA0D0282E9B28ED7 CRC64;
                                                                                                                                                                    122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PRO0109
                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00047;
Pfam; PF00069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X86445; CAA60166.1; --
HSSP; P11362; 1FGK
MGD; MGI:103581; Musk
                                                                  15 EVIEGPQNATVLKGSQARENCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ganju P., Walls E., Brennan J., Reith A.D.; "Cloning and developmental expression of Nsk2, a novel receptor tyrosine kinase implicated in skeletal myogenesis,."; Oncogene 11:281-290(1995). "I SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NSK2 protein precursor.
MUSK OR NSK2.
MUS musculus (Mouse).
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=95349951; PubMed=7624144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q61988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               389 VVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           274 ------CCCRCC-----FCCR 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             336 LVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAAEALLCYHLFLECSPG 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        226 LSSLPSLGFSLP-----TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-- 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  278 --GLYTCIATNKHGEKFSTAKAAATVSTAEWSKSQKDSQGYCAQYRGEGVLMQGPGEKML 335
                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                 pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                  ; TYRKINASE.
                                                                                               6.2%; Score 127.5; DB 11; Length 881; 21.7%; Pred. No. 0.0078; Indels 87; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           881 AA
                                                                                                  16;
```

```
В
                                               Qγ
                                                                                      Дδ
                                                                                                                         Qγ
                                                                                                                                                                В
                                                                                                                                                                                                    γ
                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                            γO
                                                                                                                                                                                                                                                                                                                     Дb
389 VVPTPMPICREYCLAVKELFCAK 411
                                    274 ------CCCRCC-----FCCR 283
                                                             336 LVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAAEALLCYHLFLECSPG 388
                                                                                                  226 LSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-- 273
                                                                                                                                       278 --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSOKDSOGYCAOYRGEGVLMOGPGEKML 335
                                                                                                                                                                              184 SNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQDTGGGINIPG-----V 225
                                                                                                                                                                                                                 224 TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                                                                                                                                                                      129 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                                                                                                                                                                                                             172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
```

Search completed: April 28, 2003, 21:07:34 Job time: 42.7435 secs

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                   Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               April 28, 2003, 23:25:03; Search time 3225.61 Seconds (without alignments)
10538.186 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 agtgatcatggtggcaggag.....gtaatacaactgtagtatag 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-729-264-3
1168
                                                                                                                                                                                                                                                                                                                                                                       GenEmbl:*
1: gb_ba:*
2: gb_htg:
3: gb_in:*
 2054640 seqs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                  gb_ba:*
gb_htg:*
gb_in:*
gb_om:*
em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:*
                           em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
em_htg_vrt:*
em_sy:*
                                                                                    em_htg_hum:*
em_htg_inv:*
em_htg_other:*
                                                                                                                                            em_hum:*
em_mu:*
em_mu:*
em_om:*
em_or:*
em_or:*
em_pat:*
em_pat:*
em_pl:*
                                                                                                                                                                                                                                                              gb_sy:*
gb_un:*
gb_vi:*
                                                                                                                                                                                                                                                                                           gb_ro:*
gb_sts:*
                                                                                                                                                                                                                                                                                                               gb_pr:*
                                                                                                                                                                                                                                                                                                                       gb_ph:*
                                                                                                                                                                                                                                           em_ba:*
em_fun:*
                                                                                                                  em_un:*
em_vi:*
                                                                                                                                                                                                                                                                                                                                           b_pat:*
                                                                                                                                     em_sts:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4109280
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

44 45		0 A 4 L	. 4	ωı	G (0 0 3 0 3 0 9 0 9 0		27		c 25) ()) ()		c 20	_	c 18		0 L5		c 13	12	110	, , ,	8	7	on (n ≠	. u	N		Result No.	
49.4 49.2			49.4	9	۱۹	o y	ט פ	2 0	, ,	50		50.6	Ò	0	Ļ	! ٠٠	N.	٠,	N.	ப	54.8	ı, i	л с	л U Л ^ л 4	10	71.	81.	181.8		26.	26.	78.	₁ د	۷.	'nN	116	Score	
4.2	4.2	4.2	4.2	4.2	4.2	* *	۰. د د	٠,4 د. د.	. <u>.</u>	4.3	4.3	4. 3.	. A.	4.3	4.4	4.4	 	ь. 50	4 ·	4.5					•				n U	•	8	32.4	۰.	0 5 5 0 7 9		00	Query Match	æ
138 333	1263	0685	ıω	6238	8809	2002	984	6117	548	49	467	5 5 4	1 / E	162971	558	ω	w	9540	3 6	7805	98	106	9	7.000	2 6	7586	S	O (7696	20	4274	1195	٠. د د	20	2 7	116	Length	
NN	2	w u	o د	2	N	۱ س	s o	ی د	N	2	N	N	o ce	N	N	σ	ω (با بد	٥ <i>د</i>	N	ν	91	N (٥	ی د	N	10	o 0	n 1	φ	9	o 0	ט כ	א ע	σ	6	DB	
AC1153 AC1269	AC09509	AE00379	AC1226	AC00784	AC0181	AC00818	AC10097	N CH	AC108346	AC.	AC:		AC	AC	AC	BD(AE C	A C	A C	AC	AC:	SH	AC S	ISH C	A	AC.	ВС	AX38040	ACOZOGO	HS21C08	AF12178	AX380	AX38040	AX38040	AXSBUSS	AX3803	ID	SUMMARIES
AC115350 RATTUS NO AC126948 Rattus no	095096 Rattus n	03797 Drosc	9 5	007840 Drosophi	018184 Dr	008188 Dro	100974 Mus mus	129166 Rattus	T131896 HOMO SA	113770 Rattus	128466 Rat	68 Rat	27 52++110	39 Kattus n	38 Rattus	79 DJ	36 Drosophi	03 Drosoph)2 Drosoph	AC118358 Rattus no	16 Mus musc	1	C120145 Mus	3332 Human	2085	วรถเ	004806 Mus mu	80406 Seq	040	63280 Homo	21782 Homo	380404 Sequence	380402 Sequenc	80400 Sequen	nansia Homo sa	380398 Sequenc	Description	

REFERENCE AUTHORS TITLE JOURNAL	VERSION KEYWORDS SOURCE ORGANISM	RESULT 1 AX380398 LOCUS DEFINITION ACCESSION
Welcher,A.A., Sarmiento,U.M., Schultz,H.J. and Chute,H.T. B7-like molecules and uses thereof Patent: WO 0200710-A 3 03-JAN-2002;	AX380398.1 GI:19575328 human. Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	AX380398 1168 bp DNA linear PAT 18-MAR-2002 Sequence 3 from Patent WO0200710.

ALIGNMENTS

Pred. No.

is the number of results predicted by chance to have a

```
δÃ
    Qy
                                  밁
                                                                                           В
                                                                                                                      Qγ
                                                                                                                                                   밁
                                                                                                                                                                              ρ
                                                                                                                                                                                                               B
                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                        Ър
                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Sin
Matches 1168;
      721
                                                                                                                         601
                                                                                                                                                       541
                                                                                                                                                                                                                481
                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                          AGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTT
                                                                                                     GAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTGCCCCA 660
                                                                                                                                               AGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTG
                                                                                                                                                                                                                                                                                                                            AGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTG
                                                                                                                                                                                                                                                                                                                                                                                    GAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTACCGTCCA
TTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTCTGACGCC
                                                                                     GAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCA
                                                                                                                                                                                                                        TCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGC
                                                                                                                                                                                                                                                                                   TGAAGTTACTTGTCTACACCCTCACACTGGACCTGGCTCCCGGATATTTCCTGGGAGGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGGGCGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGG
                             AGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTT
                                                                                                                                                                                                        TCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGC
                                                                                                                                                                                                                                                                    TGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGGATATTTCCTGGGAGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTGATCATGGTGGCAGGAGCCATGGAAAATAGAGACCCCACCCGGTTCTGGGTCTGGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amgen, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_statt--/
/protein_id="CAD28217.1"
/db_xref="GI:19575329"
/db_xref="GI:19575329"
/db_xref="GI:19575329"
/db_xref="GI:19575329"
/translation="mvagamenrDppgsgsgnevIegpQnarvikgsQarfucTvsQg .
wklimwalsdmvvLsyrapmepiITmoratsQrkvDoggnerTsemiIHnvbesgdsgniRc
StQnsrkidgsavITvQvmgeLfIPsVnLvvaemepCeVTCLpsHwttwILpDIsweLGLL
vsHssyrtvpepsDLOsavSilalipoSngTiTvvatWscikarksatvNitvvIRcpQ
DTGGGINIPGVLSSLPSLGFSLpTwGkVglGlagtmlLTpTcTlTIRccccRrrccgc
ncccrccccrrkrgfriQfokksekektnkstetesgnensgynsdegkttdtaslp
pksCessDptQrnsScGppHQradDqrprpasHpQasfnlaspEkvSntTvv"
200 a 302 c 288 g 279 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="unnamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1168; DB 6; Pred. No. 2.4e-270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                      540
                                                                                                                                                600
                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
AX380396
LOCUS
                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
    Query Match
Best Local Sim
Matches 1126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1081
                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAACGTCCACCCAGGCCAGCCAAGTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCTGA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAATCTGAAAAAGAGAAGAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Welcher, A.A., Sarmiento, U.M., Schultz, H.J. B7-like molecules and uses thereof Patent: WO 0200710-A 1 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1175 bp
Sequence 1 from Patent W00200710
AX380396
                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                             AX380396.1
                  Similarity
                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                        295
     Conservative
                                                                                                                                                                                                                                                                                                         Inc. (US)
                                                                   /codon_start=1
/protein_id="cad28216:1"
/bxref="G1:19575327"
/db_xref="G1:19575327"
/translation="MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMMALSDMYVLSVRPMEPITYNDRFTSQRYDQGONFTSEMIIHNTEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENEPECEVTCLPFHMTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTGVATWKSLKARKSATVNLTYVRCPQDTGGGINIPGVLSSLPSLGSLASTWGKVGLGLAGTMLLTPTCTLTIRCCCGRRCCGCRCCCRCCCCRRCGCFRLGCGSLLAGTSLASTWKETETESGNENGGYNSDEQKTTOTASLPPKSCRCFCCCRKRGFRIQFQKKSEKKTNKETETESGNENGGYNSDEQKTTOTASLPPKSCESSDEQNNSSCGPPHQRADQRPPRASHPQASFNLASPEKVSNTTVV"
a 307 c 286 g 287 t
                                                                                                                                                                                                                                                                           Location/Qualifiers
1. .1175
                                                                                                                                                                                                                      /note="unnamed protein product"
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                 96.1%;
99.5%;
Score 1122.4; DB 6;
Pred. No. 2.2e-259;
0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                            6;
                                                                                                                                                                                                                                                                                                                                             and Chute, H.T.
                           Length
                              1175
                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
```

Qγ

37 CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCT

Indels

0,

Gaps

0

96

δÃ B Š 밁

Ş 멍

δð 밁

Ş 밁 δÃ 밁

밁

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                          밁
                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                           밁
      밁
                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 101 | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277
524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                                                          1064 TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              764
                                                                                                                                                                                                                                                                                                                      997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG 576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGCCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                       GACAGAAAGTGGAAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCTGCTGTAGAAGAAAAAG 876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAGGCACGATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG 816
                                                                                                                                                                                                                                                        CGCTTCTCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                   CGCTTCTCTCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAAAAAACAGTAGCTG 1056
                                                                                                                                                                                                                                                                                                                                                                               TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC 1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              696
                                                                                                                                                                                                                                                                           1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                943
                                                                                                                                                                                                                                                                                                                                                                                                      1003
                                                                                                                                                    1123
```

Вb 20 В δÃ 밁 Q 망 Ş 밁 δÃ 멍 δõ

Q

õ В

```
RESULT 3
AK092516
                                                                                                                                                                            .. QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                    QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity Matches 1122; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
442
                                                                                                                                                                                                                                                                                                                                                                                                                                 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        202 CGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 261
                                                    283 GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                 322
                                                                                                                                                                                                                                                                                                     163 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43 CGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGG 102
                                                                                                                                                                                                                                                                                                                                                                   CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 162
                                                                                                                     CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                              CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
Submitted (04-JUL-2002) Takao Isogai, FLJ Project(HRI Team); 2-6-7 Kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3985) Fax:81-438-52-3986) (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3975, Fax:81-438-52-3985, Fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 oligo capping; fis (full insert sequence).
Homo sapiens placenta cDNA to mRNA, clone_lib:PLACE6
Clone:PLACE6017788.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S., Yamamoto,J., Isono Kawai-Hio,Y., Saito,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Kanda,K., Wagatsuma,M., Murakawa,K., Kanehori,K., Takahashi-Fujii,A., Oshima,A., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AK092516 2051 bp mRNA linear PRI 15-JUL-200
Homo sapiens cDNA FLJ35197 fis, clone PLACE6017788, highly similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kawakami, B., Sugiyama, A., Takemoto, M., Sugiyama, T., Irie, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEDO human cDNA sequencing project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AK092516.1 GI:21751130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isogai, T. and Yamamoto, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 2051)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isogai, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="cloning vector:
463 c 474 g 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="placenta"
/clone_lib="PLACE6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="PLACE6017788"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .2051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        score 1119.6; DB 9;
pred. No. 1.1e-258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : pME18SFL3"
534 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRI 15-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nagai, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                               222
                                                                                                                                                                                                                                                                                                                                                                                             321
                      501
                                                                                                                                               441
                                                                                                                                                                                                                                                                        381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
RESULT 4
AX380400
                                            REFERENCE
                                                                                         SOURCE
                                                                                                    KEYWORDS
                                                                                                                                      DEFINITION
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                      ğ
                                                                                                              VERSION
                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
           JOURNAL
                                AUTHORS
                                                                             ORGANISM
                                                                                                                                                                                                                                                                                            1162
                                                                                                                                                                                                                                                                                                                                       1102
                                                                                                                                                                                                                                                                                                                   1003
                                                                                                                                                                                                                                                                                                                                                                        943
                                                                                                                                                                                                                                                                                                                                                                                                                            982
                                                                                                                                                                                                                                                                                                                                                                                                                                                            862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       643 TGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            742 GACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     463
                                                                                                                                                                                                           TAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                                                                                                                              TAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1327
                                                                                                                                                                                                                                        TCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTT 1122
                                                                                                                                                                                                                                                                                    TCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCC
                                                                                                                                                                                                                                                                                               TCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCC 1062
                                                                                                                                                                                                                                                                                                                             AAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTC
                                                                                                                                                                                                                                                                                                                                           AAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCCACAGACACCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                             TCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGAAGAACAAAGAAACTGAGACAGA 942
                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTGTTGTTGTTGTAGAAGAAAAAGAGGATT 882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGGA 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCGACCTTCAAAGTGCAGCAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCCTCACACTGGACCCGGCTCCCGGA 621
     B7-like molecules and uses thereof Patent: WO 0200710-A 5 03-JAN-2002;
                         Welcher, A.A., Sarmiento, U.M., Schultz, H.J.
                                                                                                                         Sequence 5 from Patent WO0200710 AX380400
                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                           Homo sapiens
                                                                                                            AX380400.1 GI:19575330
                                                                                                                                               AX380400
                                                    Eutheria;
                                               Primates; Catarrhini; Hominidae;
                                                                                                                                          1240 bp
                                                                                                                                          DNA
                           and Chute, H.T
                                                                                                                                         linear
                                                                                                                                        PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                              1161
                                                                                                                                                                                                                                                                                                                                                    1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                               981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    822
γg
                                          QΥ
                                                                                       QΥ
                                                                                                               밁
                                                                                                                                   γ
                                                                                                                                                          В
                                                                                                                                                                               Оy
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                          γΩ
                                                                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                            DЪ
                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                           Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                      766
                                                                   706
                                                                                                                                                          586
                                                                                                                                                                                                                            454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
```

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 1125;
754 ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTG
                                                                                                                                                                                                634 AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                                                                                                                                            514 TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAA 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                              526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334 GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214 TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           286 TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154 GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166 CCTGAAGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106 AGAAGCTGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94 CCTGAAGGCTCCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCAT 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34 AGACCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGT 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGG
                                                                         ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                     TGGGACTTTGACTTGCGTGGCTACCTGGAAGACCTGAAGGCCCGCAAGTCTGCAACTGT 633
                                                                                                                                                                                                                                                                                                                                              TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCCACAGAGCAA
                                                                                                                                                   AAATCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="Cad28218.1"
/db_xref="Gi.19575331"
/db_xref="Gi.19575331"
/translation="merhtltvpeavgsgsgneviegdonatvikgsgarenctvsgg
wklimmalsdmvvisvremepiitndretsgnevdoggnetsemiihnvepsdsgnirg
slonsrihgsaxitvovvgeletipsvuluvaenepcevtclpshwtrlpdiswelgli
vahssyvfvpepsdlosavsilaltposngtltcvafwslkarsaxivnitvircpd
DTGGGINLPGVLSSLPSLGESLPTWSKVGLGLAGTMLLTPTCTLTECCGCRERCCGC
NCCCCCCCRERCGERICGEOXKSEKEKTNKETETESGNENSGYNSDEOKTTETASLD
PKSCESSDPEORNSCCGPDORADORPPAASHPQASFNLASPEKVSNTTVV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (us)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          319 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1119; DB 6;
Pred. No. 1.5e-258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     305 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          298 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                   693
                                                                                                                                                                                                                                                                                                                                                                                                                                            585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

813

Š

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                       BASE COUNT
                     Š
                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1114 GGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             874 AAGAGGATTTCGTATTCAATTTCAAAGAAATCTGAAAAAAGAGAGAAGAACAAAGAAAC 933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 934 TGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA 993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTTCTTGCTGTAGAAGAAA 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAA 873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                               \vdash
                                                                                              8 ATGGTGGCAGGAGCCATGGAAAATAGAGACCCACCCGGTTCTGGGTCTGGTAATGAAGTC 67
ATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACC 127
                                                             Sequence 7 from Patent W00200710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX380402.1 GI:19575332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B7-like molecules and uses thereof patent: WO 0200710-A 7 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                   /protein_1d="CAD28219.1"
protein_1d="CAD28219.1"
protein_1d="GAD28219.1"
/protein_1d="GAD28219.1"
/protein_1d="CAD28219.1"
/protein_1d="CAD28219.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .1139
                                                                                                                                                                                                                                            ILNKETVAVALLTSGLINVHPGQQQVIHRLLLLIWPVLRRSVIQL"
300 c 283 g 266 t
                                                                                                                                                                                                                                                                                  DTGGGINIPGVLSSLESLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCCCCCCCRKRGNLKKRRQTKKLRQKVEMKTPATIQMNKRPQTPLLSLPNPVNPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="unnamed protein product"
                                                                                                                                                                  94.48;
                                                                                                                                                 0; Mismatches
                                                                                                                                                                  Score 1102.8; DB 6; Length 1139; pred. No. 1.2e-254;
                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 18-MAR-2002
                                                                                                                                                              22; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . . . Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                             밁
                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        128 GTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCCTC 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 ATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            308 AGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTACCGTCCAAGTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        548 ATCCTGGCTCTGACCCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGC 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481 GTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601 CTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCCAAGACACT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1148 AGTAATACAACTGTAGTATA 1167
                                                                                                                                                                                                                               1028 AGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGT 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             781
                                     1119 AGTAATACAACTGTAGTATA 1138
                                                                                                               1088 CCACCCAGGCCAGCCAGGCTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTC 1147
                                                                                                                                                                                                                                                                                                                                                       879
                                                                                                                                                                                                                                                                           939
                                                                                                                                                                                                                                                                                                               968 AATTCAGATGAACAAAAGACCACAGACACGCTTCTCTCCCCAAATCCTGTGAATCC 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGCCCATGGAGCCCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGC 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTTGTCTACCCTCACACTGGACCTGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTG 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCAAGACACT 667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAAAGAGAAAGAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTAC 938
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGAGTTTCGTATTCAAATTTCAAAAGAAATCT 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTICTTACAATACGCTGCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGC 847
                                                                                                                                                                                                                                                                                                                                                                                       GAAAAAGAGAAGAAACAAAGAAACTGAGACAGAAAGTGGAAAATGAAAACTCCGGCTAC 967
                                                                                                                                                                                                                                                                                                                                                                                                                               CGTTGTTGTTTCTGCTGTAGAAGAAAAAAGAG
```

540

720

866

480

```
밁
                                                                                                                         Q
                                                                                                                                                        밁
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                           Вρ
                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX380404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
528 ATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGC 587
                            468 TCACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGG 527
                                                                                               402 TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCCG 461
                                                                                                                                  408 CTGCCTTCCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTATAG
                                                                                                                                                               342 CIGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAATCTTGTAG 401
                                                                                                                                                                                                 348 TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT 407
                                                                                                                                                                                                                     282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGGCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                  288 TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                      222 TCACCTCTCAGAGGTACGACCAGGGGGGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                 228 TTAACCAAATGGTGGTGCTGAGTCTCACCACCAAGGACCCATCATCACCAACAACCGCT 287
                                                                                                                                                                                                                                                                                                                                                               162 TCAGTGACATGGTGGTGCTAAGCGTCAGGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                 168 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 227
                                                                                                                                                                                                                                                                                                                                                                                                                     102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local 701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent: WO 0200710-A 9 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B7-like molecules and uses thereon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 9 from Patent W00200710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX380404.1 GI:19575334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="cad28220.1"
/protein_id="cad28220.1"
/db_xref="GI:19575335"
/txanslation="Megsyrdvlavlvilaqltasgssyqitegpqnvtvlkdseahf
NcTvthgyrllmyrlydyvvlslttqgpiitnnrefyasynvtgsetseliihdvqps
Sweleydyssyrsfergnemrvlsvldltplgngtltcvaelkdlqavsksltydpl
TVQpppbsfsyrsflepgnemrvlsvldltplgngtltcvaelkdlqasksltydpl
TVQpppbsfgegpalptwaiitlavaeslllivliifccccasrrekeesty
QNEIRKSanmrtnkadpetklksgkebygyssbeakaaqtaslppksaevslpekrss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.4%;
62.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches 356; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 378.4; DB 6
Pred. No. 2.5e-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB_6; Length 1195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    69; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΩV
```

δÃ

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
AF121782
                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                JOURNAL,
                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1119 TIGACATCGCCAGTCCTCAGAAGGTCAGAAATGTGACTTTAGTGTA 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1122 TTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1059 TTCCTTATCAGGAACTCAATAAACATCAGCCCGGTCCAGCAACTCATCCACGGGTTTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1002 CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCC 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1005 CTCTCCCTAAATCTGCTGAAGTCAGCCTTCCAGAAAAACGCAGCAGTA-----GCC 1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     945 AAAGTGGAAAAGGAAAACTACGGGTACAGTTCGGATGAGGCAAAAGGCTGCACAGACTGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           942 AAAGTGGAAATGAAAACTCCCGGCTACAATTCAGATGAACAAAAGACCACAGAGACACCGCTT 1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   899 TCTGCAAACATGAGGACAA------ACAAAGCAGATCCGGAGACAAAGTTAA 944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            844 ----TTGTGCCTCCAGGAGAAAAAGGAAGAATCTACTTATCAAAATGAAATAAGGAAA 898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          792 TTTCCTTGCTCTTGATCCTGATCATTGTTTTGATTATAATATTCTGTTGCTG------ 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         762 GCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTC 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 745 -----AGGCCCAGCACTGCCGACCTGGGCCATCATCCTGCTGGCAGTGGCCT 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          702 GTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAG 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       708 CTGTGGTTCAGCCTCCACCTGACAGTATTGGAGAGGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           642 CTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAA 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   648 TGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCAGCAAGTCCTTAACTGTCAACCTGA 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  588 CGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACACCACTGGGCAACGGGACCT 647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          522 CCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTT 581
                                                                                                                                                                                            Submitted (21-JAN-1999) Genome Analysis, Institute for Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany
                                                                                                                                                                                     Biotechnology, Beutenbergstrasse 11,
Location/Qualifiers
                                                                                                                                                                                                                                                                           1 (Dases 1 to 142742)
Taudien, S., Dagand, E., Hildmann, T., Nordsiek, G., Drescher, B., Schattevoy, R., Weber, J., Schilling, M., Menzel, U., Yaspo, M.L.
                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF121782.1 GI:4210991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           142742 bp DNA linear PRI 02-FEI
HOMO Sapiens chromosome 21q22.3 PAC 206A10, complete sequence.
AF121782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCA 641
/evidence=not_experimental
/rpt_family="MIR"
                                                                 /map="21q22.3"
/clone="PAC 206A10"
                                                                                                         /db_xref="taxon:
/chromosome="21"
                                                                                                                                               /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRI 02-FEB-1999
```

repeat_region	repeat_region	ו מהמשת ב"דר הם דים	ropest region	repeat_region	exon	exon	repeat_region	exon	exon	exon	repeat_region	repeat_region	repeat_region	repeat_region	exon	repeat_region	repeat_region	exon	exon	repeat_region	repeat_region	exon	repeat_region		
compl /evid /rpt_					838	/66826751 /note="MZEF, score = 95.1%" /evidence=not_experimental	53856104 /evidence=not_experimental /ent familv="HERVL"	47124749 /note="Xpound exon prediction, score /note="Xpound exon prediction, score /evidence=not_experimental	46744781 /note="GRAIL, score = 42.000%, comment /note="GRAIL, score = 42.000%, comment /evidence=not_experimental	<pre>complement(35023340) /note="GRAIL, score = 65.000%, comment /evidence=not_experimental</pre>	34793618 /evidence=not_experimental /rpt_family="MLT1J"	31233470 /evidence=not_experimental /rpt_family="THE1B"	30123122 /evidence=not_experimental /rpt_family="MLT1J"	26292831 /evidence=not_experimental /rpt_family="AluSx"	complement(18341955) complement(18341955) /note="GRAIL, score = 50.000%, comment /evidence=not_experimental	complement(17802326) complement(17802326) /evidence=not_experimental /rpt family="MLTlE"	<pre>complement(1693/**/ /evidence=not_experimental /rot family="MIR"</pre>	15761710 /note="GRAIL, score = 99.000%, comment /evidence=not_experimental	15761710 /note="MZEF, score = 66.1%" /evidence=not_experimental	14811603 /evidence=not_experimental /rpt_family="L2"	11141403 /evidence=not_experimental /rpt_family="MLT11"	<pre>complement(10/8: .1102) /note="GRAIL, score = 86.000%, comment /evidence=not_experimental</pre>	<pre>complement(000001) /evidence=not_experimental /rpt_family="MER58A"</pre>	ZX.	2000 1 2000 1 415)
					comment = Initial_exon 6 bp	1		e = 70% (0%)"	ent = marginal"	9					nt = good shadow"			lt = excellent"	:			c = excellent shadow"			
. אייראי		repeat_region	repeat_region	exon	repeat_region	exon	repeat_region	exon	repeat_region	repeat_region	repeat_region	exon	repeat_region	repeat_region	exon	repeat_region	repeat_region	repeat_region	repeat_region		repeat_region	exon	exon	repeat_region	exon
	/evidence-no-company /rpt_family="THEIA" fon 1720917632	٥.	.		1604510'00 evidence=not_experimental /evidence=not_experimental /rpt_family="MER21A" /rpt_family="MER21A"	complement(154691543/) /note="xpound exon prediction, score = 62% (0%)" /note="xpound exon prediction, score = 62% (0%)" /evidence=not_experimental		complement(1496219030) /note="MZEF, score = 93%" /evidence=not_experimental	<pre>complement(1) /evidence=not /rpt_family=</pre>			/note="MZEF; scor /evidence=not_exp		Complement(***)**** /evidence=not_experimental /rpt_family="MLTlC" ***********************************		11503 .11818 /evidence-not_experimental /ryt_family="AluS9"	<pre>11318 1 + 1 /</pre>	1066511020 /evidence=not_experimental /rpt_family="MLT1F"	1024410564 /evidence=not_experimental /rpt_family="MLT1E"		/evidence=not_experimerral 9966. 10041 /note="homology = 100.00%, score = 38, counts = 2"	/evidence-not_exper.mov 290. 9371 9290. 9371 /note="GRAIL, score = 81.000%, comment = excellent shadow" /note="GRAIL, score = 81.000%, comment = excellent shadow"	/rpc_ram.ry	complement(87389232) complement(87389232) evidence=not_experimental evidence=not_experimental	8097. 8119 Note="GRAIL, score = 45.000%, comment = marginal" Note="of-note=not experimental

```
REFERENCE
                                                                                                                                       SOURCE
                                                                                                                                                    KEYWORDS
                                                                                                                                                                     VERSION
                                                                                                                                                                              ACCESSION
                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                         HS21C080
                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                          οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                   AUTHORS
                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                44557 GTCGCCTGCATGGATCTGCTTACCTTACCGTCCAAGGTGTG 44597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                44497 TGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACA 44556
                                                                                                                                                                                                                                                                                                                                                                      44257 AAATTGGCTACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATG 44316
                                                                                                                                                                                                                                                                               327 GTCGCCTGCATGGATCTGCTTACCTTACCGTCCAAGTTATG 367
                                                                                                                                                                                                                                                                                                                               267 TGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACA 326
                                                                                                                                                                                                                                                                                                                                                                                                207 TCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGGAGA 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27 AAAATAGAGACCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATG 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Toca1
          Hattori,M., Fujiyama,A., Taylor,T.D., Watanabe,H., Yada,T., Park,H.S., Toyoda,A., Ishii,K., Totoki,Y., Choi,D.K., Soeda,E., Ohki,M., Takagi,T., Sakaki,Y., Taudien,S., Blechschmidt,K.,
                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 340000)
                                                                                                                                                    Homo sapiens chromosome 21 segment HS21C080
AL163280 AP001735 BA000005
AL163280.2 GI:7717369
                                                                                                                   Homo sapiens
                                                                                                                                                                                                       HS21C080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Xpound exon prediction, score = 74% (0%)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(19228. .19361)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="GRAIL, score = 66.000%, comment = good"
/evidence=not_experimental
complement(18643. .24647)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="MZEF, score = 51.4%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /evidence=not_experimental
/rpt_family="HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="MZEF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental complement(18397. .18584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="gRAIL, score = 51.000%, comment = good shadow"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(18335. .18632)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="LTR17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(18004. .18334)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="AluSg1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(17633. .17969)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="MER34"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28.0%; Score 326.6; DB 9; Length 142742; 97.4%; Pred. No. 9.4e-68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .21275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18420
                                                                                                                                                                                                  340000 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      score = 92.8%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                    PRI 24-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
       source
                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                 * Ihnestrasse 73, D-14195 Berlin, (
* e.mail: info-chr21@molgen.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           * URL: http://genome.gbf.de/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * GBF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 anc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Dept. of Genome Analysis,
286628.
                                                  /map="21q22.3"
                                                                                                                                                     /clone="P70124"
                                                                                                                                                                                   /db_xref="taxon:9606"
/chromosome="21"
                                                                                                                                                                                                                                                                                    /map="21q22.3"
                                                                                                                                                                                                                                                                                                /chromosome="21"
                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                        /map="21q22.3"
                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
.>340000
                                                                                                             .>340000
```

Polley, A., Menzel, U., Delabar, J., Kumpf, K., Lehmann, R., Patterson, D., Reichwald, K., Rump, A., Schillhabel, M., Schudy, A., Zimmermann, W., Rosenthal, A., Kudoh, J., Shibuya, K., Kawasaki, K., Asakawa, S., Shintani, A., Sasaki, T., Nagamine, K., Mitsuyama, S., Antonarakis, S. E., Minoshima, S., Shimizu, N., Nordsiek, G., Hornischer, K., Brandt, P., Scharfe, M., Schoen, O., Desario, A., Reichelt, J., Kauer, G., Bloecker, H., Ramser, J., Beck, A., Klages, S., Gardiner, K., Riesselmann, L., Dagand, E., Wehrmeyer, S., Borzym, K., Gardiner, K., Nizetic, D., Francis, F., Lehrach, H., Reinhardt, R. and

Genetics (addresses see below)
The Chromosome 21 Mapping and Sequencing Consortium consists of
* RIKEN Genomic Sciences Center, Human Genome Research Group, *
Sagamihara 228-855, Japan,
* e.mail: sakaki@gc.riken.go.jp Submitted (05-MAY-2000) The Chromosome 21 Mapping and Sequencing Consortium: * RIKEN Genomic Sciences Center, Human Genome Research Group * Institute of Molecular Biotechnology, Genome Analysis * Keio University School of Medicine, Dept. of Molecular Biology * GBF, Dept. of Genome Analysis * Max-Planck Institute for Molecular GBF, Dept. of Genome Analysis * Max-Planck Institute for Molecular GBF, Dept. of Molecular Max-Planck Institute for Molecular

Beutenbergstrasse 11, D-07745 Jena, Germa * e.mail: gscj-submit@genome.imb-jena.de Institute of Molecular Biotechnology, Genome Analysis, *eutenbergstrasse 11, D-07745 Jena, Germany,

* Keio University School of Medicine, Dept. of Molecular Biology, URL: http://genome.imb-jena.de/

Tokyo 160-8582, Japan,
* e.mail: shimizu@dmb-med.keio.ac.jp * URL: http://adenine.dmb.med.keio.ac.jp/

* Mascheroder Weg 1, D-38124 Braunschweig, Germany, * e.mail:info.genome@gbf.de Max-Planck Institute for Molecular Genetics

URL: http://chr21.rz-berlin.mpg.de/.

/Clone="F160L9, 5' partial" /Clone=lib="RRCII,3-5 PAC library" /note="Accession No. AF121897" 73410. .243533 /organism="Homo sapiens" /db_xref="taxon:9606" /chromosome="21" ∕organism="Homo sapiens"

/clone="p206A10, 3' partial" /clone_lib="RPCI1,3-5 PAC library" /note="Accession No. AF121782" /Organism="Homo sapiens" /db_xref="taxon:9606" /chromosome="21" /clone_lib="RPCI1,3-5 PAC library" /note="Accession No. AF064860" /organism="Homo sapiens"

repeat_region

1088. .1566 /note="L1M4"

repeat_region

repeat_region

```
/organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Accession No. AF064857"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="BAC-291B3, 3' partial"
/clone_lib="BAC library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="Simple_repeat"
/rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="LINE/L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="LTR/MaLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="(TCCA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Accession No. x93498"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                         /protein_id="CAB90445.1"
/db_xref="GI:7717370"
                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="21-Glutamic Acid Rich protein 21-GARP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 join(3473. .3565,12649. .12678,15331. .15426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="SH3BGR"
                                                                                                        /rpt_type=DISPERSED
9131. .9424
                                                                                                                                                complement(8865. .8964)
/note="L2"
                                                                                                                                                                                                                   complement(8482. .8762)
                                                                                                                                                                                                                                                                    complement(6887. .7067)
                                                                                                                                                                                                                                                                                                                                                                                           translation="GSEKAEEGGETEAQKEGSEDVGNLPEAQEKNEEEGETATEETEE/
/rpt_type=DISPERSED complement(9989. .10077)
                                                                                                                                                                                                                                                                                                                                                       /gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                             AMEGAEGEAEEEETAEGEEPGEDEDS"
                                                                                                                                                                         /rpt_family="SINE/Alu"
/rpt_type=DISPERSED
                                                                                                                                                                                                                                                            /note="L1MD3"
                                                                                                                                                                                                         /note-"AluJo"
                                                                                                                                                                                                                             rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                rpt_family="SINE/Alu"
                                                    complement(9723. .9882)
                                                                             /note="AluSq"
/rpt_family="SINE/Alu"
                                                                                                                                 /rpt_family-"LINE/L2"
                                                                                                                                                                                                                                              rpt_family="LINE/L1"
                                                                 /rpt_type=DISPERSED
                        rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _type=TANDEM
                                                                                                                                                                                                                                                                                      _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (2496. .2878)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .3565,12649. .12678,15331. .15460,18739. .19157)
                                                                                                                                                                                                                                                                                                                                     RESULT 9
AC020851
                                                                                                                                                QУ
                                                                    밁
                                                                                                                      Db 268677 TGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACA 268736
                                                                                                                                                                                                                                                                                                                                                                                              Matches 332;
                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                 267 TGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACA 326
                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type=DISPERSED complement(10078. .10429)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(10430. .10651)
/note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type=DISPERSED
11702. .11753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(11315. .11556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(11002. .11282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="LTR/MaLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="THE1B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=DISPERSED
14013. 14131
/note="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="(TTTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="AluSp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(13115. .13425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(13598. .13892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12649. .12678
/gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="SINE/MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_family-"SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Alux"
                                                                                                                                                                                                                                                                                                                                                                                                               28.0%;
97.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              type=DISPERSED
9. .12678
                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                               Score 326.6; DB 9; Length 340000; pred. No. 9.8e-68;
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
```

mRNA gene

|oin(<3473

repeat_region

repeat_region

repeat_region

repeat_region

repeat_region

repeat_region

repeat_region

repeat_region

repeat_region

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Consensus quality: 186887 bases at least Q40
Consensus quality: 180887 bases at least Q30
Consensus quality: 180777 bases at least Q30
Consensus quality: 183777 bases at least Q30
Estimated insert size: 147000; pulse field gel estimation
Estimated insert size: 193700; sum-of-contigs estimation
Quality coverage: 5.67 in Q20 bases; pulse field gel estimation
auality coverage: 4.3 in Q20 bases; pulse field gel estimation

* NOTE: This is a 'working draft' sequence. It currently
tonsists of 3 contigs. The true order of the pieces
is not known and their order in this sequence record is
truns of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center clone name: RPCI-21_467L12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (10-JAN-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA on Jul 15, 2000 this sequence version replaced g1:6886457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center Project Name: 1437240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 196900)
DOE Joint Genome Institute.
Sequencing of Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC020851 196900 bp DNA linear HTG 15-JUL-2000 Mus musculus clone RP21-467L12, WORKING DRAFT SEQUENCE, 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC020851.2 GI:9211212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unordered pieces.
                                           24663
24763
27141
27241
27241
29951
30051
                                                                                                                                                                                      16047
18393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Joint Genome Institute.
                                                                                                                                                                                                                                   11494
11594
13608
13708
                                                                                                                                                                                                                                                                                                9279
                                                                                                                                                                                                                                                                                                                                            4839
7249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           er: Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HTGS_PHASE1; HTGS_DRAFT
                                                                          29950:
                                                                                                                                                                                                                                                                                                                                                                                                              1541: contig of 1541
1641: gap of unknown
3492: contig of 1851
                                                  gap of unknown contig of 2710 pgap of unknown
                                                                                                   gap of contig
                                                                                                                                                                  gap of contig
                                                                                                                                                                                              gap of contig
                                                                                                                                                                                                                                                                                                         gap of contig
                                                                                                                                                                                                                                                                                                                                                                                     gap of unknown contig of 1146
                                                                                                                                   contig
                                                                                                                                                  gap of
                                                                                                                                                                                                                                              gap o
                                                                                                                                                                                                                                                                                                                                                      gap of unknown contig of 2410
                                                                                                                                                                                                                                conti
                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                                                                                                                                           conti
                                                                                                                                                                                                                                                           contig
                                                                                                   of 2378
                                                                                                                                   of 3331
                                                                                                                                                                                                                                                                                                                        unknown
of 1830
                                                                                                                                                                  of 2739
                                                                                                                                                  unknown
                                                                                                                                                                                                of 2346
                                                                                                                                                                                  unknown
                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                              of 2239
                                                                                                                                                                                                                                                             of 2014
                                                                                                                                                                                                                                                                                           of 2215
                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                                                                                                         unknown
                  length
                                               length
                                                                                                 bp in
                                                                                                                            bp in length
                                                                                                                                                                                                                                                                                        length
bp in
                                                                                  Length
                                                                                                                 length
                                                                                                                                             length
                                                                                                                                                           bp in length
                                                                                                                                                                                                bp in
                                                                                                                                                                                                                             bp in
                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                             length
                                                                                                                                                                                                            ength
                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                              length
                                                              length
                                                                                              length
                                                                                                                                                                                         length
                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                   length
          Ъ
                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                               Query Match 15.6%;
Best Local Similarity 72.3%;
                                                                                                                                                                                                                                                                                                                                                                                      Matches 237;
67739 TGGATCTGCCTTCCTCAGTGCAAGGT 67766
                                                      67679 TGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTT 67738
                                                                                                                    67619 CCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCA 67678
                                                                                                                                                                                 67559 GACTOTTAACCAAATGGTGGTGGTGAGTCTCACCACCCAAGGACCCATCATCACCAACAA 67618
                                                                                                                                                                                                                                              67499 AAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGGCTTCTCATGTG 67558
                                                                                                                                                                                                                                                                                                          67439 CCTTCTAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCT 67498
                              337 TGGATCTGCTTACCTTACCGTCCAAGTT 364
                                                                                    277 CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA 336
                                                                                                                                                  217 CCGCTTCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCA 276
                                                                                                                                                                                                       157 GGCTCTCAGTGACATGGTGGTGGTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                          97 GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG 156
                                                                                                                                                                                                                                                                                                                                       37 CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCT 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51456 a
                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146479
161687
161787
161787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106228
106328
115796
115896
126364
126464
137190
137290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78611
78711
78715
88152
88252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68025
68125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50185
50285
54573
54673
60228
60328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46438
46538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40388
40488
43581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32346
35689
35789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43681
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="RPCI mouse PAC library 21"
43823 c 44608 g 53666 t 3347 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
/clone="RP21-467L12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .196900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            location,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          137289: gap of unknown length
146378: contig of 9089 bp in length
146478: gap of unknown length
161686: contig of 15208 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      196900: contig of 20651 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51786: gap of unknown length
76149: contig of 14363 bp in length
76249: gap of unknown length
76249: gap of 20651 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qualifiers
                                                                                                                                                                                                                                                                                                                                                                Score 182.4; DB 2; Pred. No. 4.8e-33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0: gap of unknown length
7: contig of 2757 bp in length
7: gap of unknown length
4: contig of 3647 bp in length
4: gap of unknown length
5: contig of 4288 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig of 3343;
gap of unknown
contig of 4599;
gap of unknown
contig of 3093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of unknown length contig of 5555 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of unknown length
ig of 8006 bp in length
of unknown length
ig of 9870 bp in length
of unknown length
lg of 9468 bp in length
if unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown length
of 10726 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown length
of 10486 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown length of 10468 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unknown length of 9441 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 3343 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 196900;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
```

0,

```
RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX380408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                   Вр
                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                         LOCUS
                 SOURCE
                                                    VERSION
                                                                                        DEFINITION
                                                                                                                           AX380406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                   KEYWORDS
                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 234; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         108 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 167
                                                                                                                                                                                                                                                                          348 TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT 407
                                                                                                                                                                                                                                                                                                             282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                   408 CTGCCTTCCTCTCAGTGCAAG 428
                                                                                                                                                                                                                                      342 CTGCTTACCTTACCGTCCAAG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                  TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                         TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 227
                                                                                                                                                                                                                                                                                                                                                                                     TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 13 from Patent W00200710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX380408.1 GI:19575338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX380408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B7-like molecules and uses thereof patent: WO 0200710-A 13 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 15.6%;
Similarity 72.9%;
                                                                    Sequence 11 from Patent W00200710.
Mus musculus
                                                    AX380406.1 GI:19575336
                                                                                                           AX380406
                   house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="megswrdvlavlvilaqltasgssyqiiegpqnvtvlkdseahf
NCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFTYASYNGTDSFISELIIHDVQPS
DSGSVQCSLQNSHGF6SAFLSVQESTYQNEIRKSANMRTNKADPETKLKSGKENYGYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SDEAKAAQTASLPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="CAD28222.1"
/db_xref="GI:19575339"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  191 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 181.8; DB 6; Length 754; Pred. No. 5.1e-33; 0; Mismatches 87; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175 g
                                                                                                                 895 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    168 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                   DNA
                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                     PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                              347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                           BC004806
                                                                                                                                                                                                                                                                                                                                                             RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                   REFERENCE
                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 234; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                         ORGANISM
                                                                           JOURNAL
                                                                                               TITLE
   REMARK
                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228 TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                     408 CTGCCTTCCTCTGGTGCAAG 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                       342 CTGCTTACCTTACCGTCCAAG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B7-like molecules and uses thereof patent: WO 0200710-A 11 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amgen, Inc.
                                                                                                                                                                                                                                                                       1556 bp mRNA linear ROD (Mus musculus, RIKEN cDNA 2010003D20 gene, clone MGC:7960 IMAGE:3584645, mRNA, complete cds.
                                     submitted (21-MAR-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mu
                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                 MGC
                                                                                                                                                                                                                                                 BC004806.1 GI:13435932
                                                                                             Direct Submission
                                                                                                                 Strausberg, R
                                                                                                                                                                                                             house mouse
                                                                                                                                     (bases 1 to 1556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
/translation="MEGSWRDVLSLTTQGPIITNNRFTYASYNSTDSFISELIIHDVQPS
NCTVPHGWKLLMWTLMQMVVLSLTTQGPIITNNRFTYASYNSTDSFISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLIILIVLIII
FCCCCASRREKEESTYQNEIRKSANMKTNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
223 c 212 g 210 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /protein_id="CAD28221.1"
/db_xref="GI:19575337"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  score 181.8; D
Pred. No. 5.2e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                         ROD 07-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                287
                                                                                                                                                                     Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
410 CTGCCTTCCTCTGGGGGAAG 430
                                          342 CTGCTTACCTTACCGTCCAAG 362
                                                                             350 TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT 409
                                                                                                                          282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                            222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                        230 TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT 289
                                                                                                                                                                                                                                                                                                           162 TCAGTGACATGGTGGTGGTGCTCAGGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                  170 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 229
                                                                                                                                                                                                                                                                                                                                                                                                               102 GCTCCCAGGCTCGACTGCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                            110 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15.6%;
Similarity 72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 10 Row: m Column: 23
This clone was selected for full length sequencing because it
passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gunaratne, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M., Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D.M., Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tissue Procurement: Gilbert Smith, Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clone distribution: MGC clone distribution information can be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Web site: http://www.hgsc.bcm.tmc.edu/cdna/Contact: amg@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: BCM-HGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: MGC help desk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             447 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
NCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFTYASYNSTDSFISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIII
FCCCCASRREKEESTYQNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /product="RIKEN cDNA 2010003D20 gene"
/protein_id="AAH04806.1"
/db_xref="GI:13435933"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="Mammary tumor. Metallothionien-TGF alpha model. 10 month old virgin mouse. Taken by biopsy." /clone_lib="NCI_CGAP_Mam1" /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="LocusID:72058"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="MGC:7960 IMAGE:3584645"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /map="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        364 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vector: pcmv-sport6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 181.8; DB 10, Pred. No. 5.3e-33; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   367 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
AC120346/c
                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
```

Ş 밁

http://ftp.genome.washington.edu/RM/RepeatMasker.html

밁 Ş ₽ Ş д ρ В Q

```
Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad, Toh, K., Liu, G., MacCean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCerthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Myuyen, C., Nicol, R., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Senman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Topham, K., Travers, M., Travis, N., Trigillo, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Tamback, I., Timmer, a., and Tolde, M., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., Timmer, a., and Tolde, M., Ye, W.J., Young, G., and Tolde, M., Ye, W.J., Ye, W.J., Young, G., and Tolde, M., Ye, W.J., Ye, W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RS Birren, B. Linton, L. Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campoplano, A., Chang, J., Chazaro, B., Choepel, V., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., Fitchugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., God, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., Norbu, C., Norman, C., Murphy, T., Naylor, J., Weneus, L., Mihoya, T., Melaga, V., Murphy, T., Naylor, J., Wquen, C., Nicol, R., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schupback, R., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Direct Submission
Submitted (09-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 9, 2002 this sequence version replaced g1:20503171. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 (bases 1 to 175861)
3 (bases 1 to 175861)
8 Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastlen, V., Bloom, T., Boguslav, V., L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Charles, C., Cooke, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Cooke, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Cooke, P., Cooke, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zainoun,J., Zembek,L., Zimmer,A. and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Research,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Birren,B., Linton,L., Nusbaum,C
Mus musculus, clone RP23-147Ell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus clone RP23-147E11, WORKING DRAFT SEQUENCE, 22 ordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 178861)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC120346.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC120346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 175861)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (06-MAY-2002) Whitehead Institute/MIT Center for Genome 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:20514894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nusbaum, C. and Lander, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 175861 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HTG 09-MAY-2002
```

-- Genome Center

Center clone name: 147_E_11 Center project name:

```
* NOTE: This is a 'working draft' sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   variables of 22 contigs. Gaps between the contigs to believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

This sequence will be replaced by the finished sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       by the finished sequence as soon as it is available and the accession number will be preserved.

1 28835: contig of 28835 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731 Consensus quality: 169879 bases at least 040 Consensus quality: 172188 bases at least 030 Consensus quality: 173133 bases at least 020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Quality coverage: 8.3 in Q20 bases; agarose-fp quality coverage: 8.4 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Insert size: 176000; agarose-fp
Insert size: 173761; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequencing vector: Plasmid;
                                                                                                                                                                                                                                                                                             43204 43303: gap of 100 bp 43304 47489; contig of 4186 bp in length 47490 47589; gap of 100 bp 50604; contig of 3015 bp in length 50705 50704; gap of 100 bp 50705 56370; contig of 5666 bp in length 56371 56470; gap of 100 bp 56471 64479; contig of 7609 bp in length
                                                                                                                      72720 81566: contig of 8847 bp in length 81567 81666: gap of 100 bp 81567 81667 96774: contig of 15108 bp in length 96775 96874: gap of 100 bp 96875 119647: contig of 2775 bp in length 106875 119647: config of 2775 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39167 39266; gap of 100 bp
39267 41065; contig of 1799 bp in length
41066 41165; gap of 100 bp
41166 43203; contig of 2038 bp in length
                                                                                                                                                                                               100 b.

72619: contig of 8440

72620 72719: gap of 100 bp

72720 81566: contig f

1567 81667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp 10328: contig of 666 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228: gap of 100 bp
34512: contig of 1284 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     335: gap of 100 bp
29562: contig of 627 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05: gap of 100 bp 1013 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79: gap of 100 bp
37483: contig of 1304 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 p of 100 bp
contig of 1577 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        p of 100 bp
contig of 1467 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of 1583 bp in length
                                              ap of 100 bp
contig of 26685 bp in length
                                                                                    contig of 28025
           contig of 1204 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 bp
                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                    100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n/a; 100% of reads
                                                                                                               100 bp
                                                                                                                                                                                                                                                             bp in length
                                                                                           bp in length
                                                                                                                                                                                                        Db 120535 CCTTCTAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCT 120476
                                          Db 120415 GGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCAACGAGGACCCATCATCACCAACA 120356
                                                                                                                        Db 120475 AAAGGACTCAGAGGCTCACTTCAACTGCACCGTGGGCTCACGGCTGGAAGCTTCTCATGT 120416
                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                156 GGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATG 215
216 ACCGCTTCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCC 275
                                                                                                                                                                                                                                                37 CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAAATGCAAGAGTCCT 96
                                                                                                                                                                  97 GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGT-CTCCCAGGGCTGGAAGCTCATCATGT 155
                                                                                                                                                                                                                                                                                                              Match 14.7%; Score 171.4; DB 2.10cal_Similarity 72.0%; Pred. No. 2.1e-30;
                                                                                                                                                                                                                                                                                             237; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_fragment"
50705. .56370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30429. .32005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="RPCI-23 Female Mouse BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
/clone="RP23-147E11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41166. .43203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                           vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
174658. .175861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment"
147873. .174557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
72720. .81566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                               clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
119748. .147772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
96875. .119647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note-"assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                     39540 c 39029 g 46286 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .37483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .36079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .33128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .30328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .34512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .64079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .39166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .29562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .96774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .50604
                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                        91;
                                                                                                                                                                                                                                                                                                                                                                                                              2103 others
                                                                                                                                                                                                                                                                                                                                              Length 175861;
                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                            1; Gaps
```

28836 28935:

29563 29662:

0329 30428:

32005

2006 32105:

34513 34612:

36079: cont

33129 33228:

37484 37583:

39166: cont

47489; cont

6080 36179:

FEATURES

174558 174657: gap of 174658 175861: conti 147773 147872: gap of 147873 174557: cont 119648 119747: gap of 119748 147772: cont

Location/Qualifiers

64080 64179: gap of

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
AF064857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db 120235 TTGGATCTGCCTTCCTCAGTGCAAGGT 120207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 120295 ATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGT 120236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 120355 ACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCC 120296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                         repeat_region
                                                                                   repeat_region
                                                                                                                                              repeat_region
                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    336 ATGGATCTGCTTACCTTACCGTCCAAGTT 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276 ACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGC 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (11-MAY-1998) Genome Analysis, Institute for Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AF064857 199665 bp DNA linear PRI 23. Homo sapiens BAC derived from chromosome 21q22.3, complete sequence, containing PEP19 (PCP4) gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schattevoy, R. and Rosenthal, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Taudien, S., Nordsiek, G., Korenberg, J., Drescher, B., Weber, J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 199665)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF064857.1 GI:3171149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lomo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                              cumplement(1584, .2179)
/evidence=not_experimental
/rpt_family="LlpA2"
2174, .3406
                                                                                                                                                                                                         /rpt_family="L1ME3A" 6671. .6969
                                   /evidence=not_experimental
/rpt_family="L1ME3A"
                                                                               complement(7387. .7491)
                                                                                                                                            complement(7057. .7376)
                                                                                                /evidence=not_experimental
/rpt_family="MER2"
                                                                                                                                                         /evidence=not_experimental
/rpt_family="AluJb"
                                                                                                                                                                                                                                                              complement(6245. .6668)
                                                                                                                                                                                                                                           /evidence=not_experimental
                                                                                                                                                                                                                                                                                     rpt_family="MIR"
                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
/rpt_family="L1P"
                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="L1PA2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(1345 .1500)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(1. .383)
                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="L1PA2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
/rpt_family="L1PA4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="L1"
747. .814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="21"
/map="21q22.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .199665
                         .8020
                                                                                                                                                                                                                                                                                                                             .4086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRI 23-JUN-1998
                                              repeat_region
                                                                                                                                                                   repeat_region
                                                                                                        repeat_region
                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
/evidence=not_experimental
/rpt_family="MSTD"
complement(32766. .32980)
/evidence=not_experimental
/rpt_family="MSTD"
                                                                                              /evidence=not_experimental
/rpt_family="MLT1A2"
complement(32507. 32738)
                                                                                                                                                             /evidence=not_experimental
/rpt_family="MLTIB"
31012. 31364
                                                                                                                                                                                                                        complement(30308. .30676)
                                                                                                                                                                                                                                                                                     complement(29462, .30001)
                                                                                                                                                                                                                                                                                                                                             complement(28932. .29335)
                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="MER34"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/rpt_family="MER58B"
25993. .26294
                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
/rpt_family="MSTA"
                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(25434. .25767)
                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="M]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24455. .24889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24223. .24454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="MSTB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/rpt_family="MER39b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23202. .23471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(22583. .23201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="MER3"
21213. .21500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_unit=agtatctattctgattgggcagtgctcatac
complement(20371...20556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/rpt_family="THE1B"
19378. . 19470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="MSTB-internal"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/rpt_family="L1PA2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="MER39b"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22291. .22567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(18994. .19347)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(15662. .15785)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(13823. .14116)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(13514. .13814)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="homology = 81.70%, score = 28, counts = 3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(10456. .10720)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="MER58A"
8650. .8823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_type=tandem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
/rpt_family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
/rpt_family="L1PA5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .8823
```

```
Query Match
Best Local Similarity
Matches 100; Conserv
                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                repeat_region
                                                                                                               repeat_region
                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
    Conservative
                                                                /rpt_fa
48905.
                                                                                                                                                                                                       /evidence=not_experimental
/rpt_family="L1PB1"
complement(46792...47084)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       compi
                                                                                                                                                               /rpt_family="L1MA"
47189. .47992
                                                                                                                                                                                                                                                                                                                                                        /rpt_family="
42138. .42317
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
/rpt_family="Alusx"
40543. 41180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental
/rpt_family="L2"
38477. .39376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="THE1B" 34563. .34620
                                                                                                                                                                                                                                                          complement(42758. .46751)
                                                                                                                                                                                                                                                                                                         complement(42332. .42710)
                                                                                                                                                                                                                                                                                                                                                                                                      complement(42066. .42114)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(40243. .40542)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
/rpt_family="MLT1D"
39884. .40122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/rpt_family="L2"
39552. .39861
                                                                               /evidence=not_experimental
/rpt_family="MIR"
                                                                                                             complement(48002. .48132)
                                                                                                                              /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="L1PB1"
                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                       /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(36717. .36828)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="MLT2CB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(36403. .36475)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(35924. .36345)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(35785. .35824
                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="MLT1D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="MER67C"
complement(37064. .37364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
/rpt_family="MLT2CB"
                                                                                                                                                                                             /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'rpt_type=tandem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note="homology = 98.40%, score = 29, counts =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="Aluy"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="MLT2CB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_unit=tttccagaaaagaatacgtactttaggca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_type=tandem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="homology = 93.10%, score =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
8.6%; Score 100; DB 9;
100.0%; Pred. No. 3.3e-13;
htive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _unit=aaaacacttcactttgtcttcaaaactgctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . .38158
                                 Length 199665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21, counts =
 0
 Gaps
 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            УQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC020851/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unordered
                7349
9179
9279
11494
11594
13608
13708
                                                                                                                                                                           1542
1642
3493
3593
                                                                                                                                           4839
                                                                                                                                                             4739
```

```
Consensus quality: 180887 bases at least Q40
Consensus quality: 180887 bases at least Q30
Consensus quality: 180777 bases at least Q30
Consensus quality: 183777 bases at least Q30
Estimated insert size: 147000; pulse field gel estimation
Estimated insert size: 193700; sum-of-contigs estimation
Quality coverage: 5.67 in Q20 bases; pulse field gel estimation
**NOTE: This is a 'working draft' sequence. It currently
** consists of 3 contigs. The true order of the pieces
** is not known and their order in this sequence record is
** arbitrary. Gaps between the contigs are represented as
** runs of N, but the exact sizes of the gaps are unknown.
** This record will be updated with the finished sequence
** as soon as it is available and the accession number will
** be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACCAGGCTTCTTTTAATCT 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTTAATCT 17614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission Submitted (10-JAN-2000) Production Sequencing Facility, DOE Joint Submitted (10-JAN-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Jul 15, 2000 this sequence version replaced gi:6686457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC020851 196900 bp DNA linear HTG 15-JUL-2000 Mus musculus clone RP21-467L12, WORKING DRAFT SEQUENCE, 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center Project Name: 1437240
Center clone name: RPCI-21_467L12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Joint Genome Institute Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 (bases 1 to 196900)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 19690)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTG; HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequencing of Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC020851.2 GI:9211212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pieces.
                                                              11493
11593
13607
13707
                                                                                                                                                                                                                                                  3592:
4738:
                                                                                                                                                                                                                                                                                          1541:
1641:
3492:
                                                                                                                                                                                                                                 4838
                                    gap of contig
                                                                                                                                                                                                                                                gap of contig gap of contig
gap of contig
                                                                               gap of contig
                                                                                                                        gap of contig
                                                                                                                                                                gap of contig
                                                                                                                                                                                                         gap of
contig
                                                                                                                                                                                                                                                                                                                               contig
                                                                                 unknown
of 2014
                                                                                                                                                                                                                                                  of 1146
                                                                                                                                                                                                                                                                                      unknown
of 1851
                                      unknown
of 2239
                                                                                                                                                                                                         unknown
of 2410
                                                                                                                          of 2215
                                                                                                                                                                  of 1830
                                                                                                                                                                                                                                                                                                            of 1541 bp in length unknown length
                     unknown
                                                                                                                                               unknown
                                                                                                                                                                                      unknown
                                                                                                                                                                                                     1 bp in length
n length
5 bp in length
n length
n length
bp in length
                                                                                                                                             length
bp in ]
length
                   bp in
length
                                                            bp in ]
length
                                                                                                    bp in l
length
                                        length
                                                                                                                                                                length
                                                                                 length
                                                                                                                        length
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
source
                                                                                                                                                                                                                                                                                  Db 119051 ACACTGACCCTTCTACCTTTGTTACCAGGAACTCAATAAACATCAGCCCGGTCCAGCAAC 118992
Db 118931 GTA 118929
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 4.9%;
Best Local Similarity 66.7%;
Matches 82; Conservative
                                                                                                                                             118991
                                                                    1165
                                                                                                                                     1045 AAACAGTAGCTGTGGCCCTCCTCACCAGCGGCTGATCAACGTCCACCCAGGCCAGCAAG 1104
                                                                    ATA 1167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Iocation/Qualifiers
1. 196900
/organism="Mus musculus"
/db_xref="taxon:10090"
/clone="RP21-467L12"
/clone_lib="RPCI mouse PAC library
/51456 a 43823 c 44608 g 53666 t 3347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              115896
126364
126464
127190
137290
146379
146479
146479
161687
161787
176150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27141
27241
29951
30051
30051
35689
35689
35689
40488
40488
40488
40488
40488
40589
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50285
50288
50328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
60328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24663
24763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18393
18493
21232
21332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18492: gap of
21331: contig
214662: contig
214662: gap of
27140: contig
27240: gap of
27140: contig
2950: contig
30050: gap of
32245: gap of
352845: gap of
40487: gap of
43580: contig
43580: gap of
44637: gap of
54672: gap of
54672: gap of
66027: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 57.4; DB 2;
Pred. No. 0.0058;
0; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ig of 3093 bp in length unknown length of 2757 bp in length of 2757 bp in length of wiknown length length in length 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 4599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 3093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unknown
of 3343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
of 2195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 2710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
length
lp in length
length
length
bp in length
bp in length
bp in length
length
length
length
length
length
length
bp in length
length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in :
length
                                                                                                                                                                                                                                                                                                                                                                                                                                           41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 196900;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21"
others
                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

Ş В Q δÃ

0;

Search completed: April 29, 2003, 14:30:21 Job time: 4416.94 secs

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 28, 2003, 16:24:30 ; Search time 10.2617 Seconds (without alignments) 1543.990 Million cell updates/sec

Title: Perfect score:

Sequence: US-09-729-264-2 2059 1 MGLVIFLHGSGSGNEVIEGP......HPQASFNLASPEKVSNTTVV 382

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

112892 segs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	, + :	Result
129.5 128 128 128 128 127 127 127 119 119 119 117.5 113.5 11	147.5	Score
		Query Match L
344 1 1447 1 1914 1 1014 7 1044 7 1044 7 1044 7 1045 1 345 1 345 1 345 1 345 1 345 1 346 1 1046 1 105 1 106 2 107 2 109 2 1	- 1	Length DB
WTRI_RAT CEPU_CHICK CEPU_CHICK DCC_HUMAN DCC_HUMAN KMLS_HUMAN KMLS_HUMAN KMLS_HUMAN NPCM_HUMAN OPCM_HUMAN OPCM_HUMAN OPCM_HUMAN OPCM_BOVIT OPCM_RAT NEO1_CHICCI NEO1_RAT ICCAR_ROM BUTY_MOUS SMP_COTJA CASR_HUMAN NGO1_RAT ICCAR_HUMAN NGO2_RAT ICCAR_HUMAN NGO2_RAT ICCAR_HUMAN ICCA_XENLI ICCAR_HUMAN ICCAR_H	RAGE_HUMAN	ID
	7.2	1
gallus 6 homo s 7 homo s 8 homo s 2 homo s 2 homo s 2 homo s 2 homo s 8 homo s 2 homo s 1 mus m 1 mus m 1 homo s 1 homo s 2 homo s 3 hos ta 3 hos ta 3 hos ta 4 cotur 6 mus m 6 mus m 6 mus m 6 mus m 6 rattus 7 homo s 7 homo s 8 homo s 8 homo s 8 rattus 8 homo s 9 homo s	Q15109 homo sapien O98892 gallus gall	Description

35 444444 40 40 40 40 40 40 40 40 40 40 40
102 100.5 100 99.5 99.5 99.5 99.9 99
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
880 873 1241 261 1260 1906 2481 338 338 338 359 830
TYO3_RAT FAS2_DROME NDHN, HUMAN KLK6_RAT CAML_MOUSE KMLS_CHICK UN52_CAEEL LAMP_HUMAN LAMP_RAT LACH_DROME SREC_HUMAN TYO3_MOUSE
p35146 rattus norv p34082 drosophila o65090 homo sapien p36374 rattus norv p11627 mus musculu p11799 gallus gall 006561 caenorhabdi 013449 homo sapien 062813 rattus norv 024372 drosophila 014162 homo sapien p55144 mus musculu

ALIGNMENTS

RP RT RT RP RP RT	RP R	RA RT RL	RP RA RT	RESULT RAGE_HI RAGE_HI RAGE_HI RAGE HI RAGE RAGE RAGE RAGE RAGE RAGE RAGE RAGE
SEQUENCE FROM N.A. (ISOFORM 2). SEQUENCE FROM N.A. (ISOFORM 2). Malherbe P., Richards J., Gaillard H., Thompson A., Diener C., Malherbe P., Richards J., Gaillard H., Thompson A., Diener C., Schuler A., Huber G.; Schuler A., Huber G.; Schuler A., Huber G.; "CDNA cloning of a novel secreted isoform of the human Receptor for advanced Glycation End products (RAGE) and characterization of cells advanced Glycation End products (RAGE) and characterization of cells co-expressing cell-surface scavenger receptors and Swedish mutant amyloid precursor protein."; Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases. [6] SEQUENCE FROM N.A. (ISOFORM 1).	SEQUENCE FROM N.A. (ISOFORM 1). Rowen L., Dankers C., Baskin D., Faust J., Loretz C., Ahearn M.E., Rowen L., Dankers C., Baskin D., Faust J., Loretz C., Ahearn M.E., Banta A., Spies T., Hood L.; Banta A., Spies T., Hood L.; Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases. [4] SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANT ARG-100. Abedin M.J., Yonekura H., Migita H., Karasawa J., Yamamoto Y., Yamamoto H.; Yamamoto H.; "Molecular heterogeneity of the receptor for advanced glycation endproducts."; Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.	SEQUENCE FROM N.A. (ISOFORM 1). SEQUENCE FROM N.A. (ISOFORM 1). MEDLINE=95137597; PubMed-7835890; Sugaya K., Fukagawa T., Matsumoto K., Mita K., Takahashi E., Ando A., Sugaya K., Fukagawa T., Matsumoto K., Mita K., Takahashi E., Ando A., Inoko H., Ikemura T.; Inoko H., Ikemura T.; Inoko H., Ikemura T.; Three genes in the human MHC class III region near the junction with "Three genes in the human MHC class III region near the junction with the class II: gene for receptor of advanced glycosylation end the class II: gene for receptor of advanced glycosylation end products, PBX2 homeobox gene and a notch homolog, human counterpart of mouse mammary tumor gene int-3."; Genomics 23:408-419(1994).	SEQUENCE FROM N.A. (ISOFORM 1). SEQUENCE FROM N.A. (ISOFORM 1). TISSUE=Lung; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; Pan Y.C., MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; PubMed=1378843; MEDLINE=92340547; Pan Y.C., MEDLINE=92340547; Pan	LT 1 HIMAN RAGE HUMAN STANDARD; PRT; 404 AA. RAGE HUMAN STANDARD; PRT; 404 AA. RAGE HUMAN Q15109; Q15279; Q9Y3R3; Q9H2X7; Q15109; Q15279; Q9Y3R3; Q9H2X7; Q1-NOV-1997 (Rel. 35, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) 15-JUN-2002 (Rel. 41, Last annotation update) 15-JUN-2002 (Rel. 41, Last annotation update) 16-JUN-2002 (Rel. 41, Last annotation update) 16-JUN

```
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_C2.
InterPro; IPR003500; Ig_like.
Pfam; PF00047; Ig; 2.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 1.
PROSITE; PS00290; IG_MHC; 1.
    CONFLICT
                         VARIANT
                                                                                                                          CARBOHYD
                                                                                                                                        CARBOHYD
                                                                                                    VARSPLIC
                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                             Immunoglobulin domain; Glycoprotein Alternative splicing; Polymorphism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AB036432; BAA89369.1; --
EMBL; AJ133822; CAB43108.1; --
EMBL; BC020669; AAH20669.1; --
EMBL; AF208289; AAG35728.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE SPECIFICITY: ENDOTHELIAL CELLS.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
SIMILARITY: CONTAINS 2 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Secreted (1soform 2).
ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1
ARE PRODUCED BY ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Type I membrane protein (isoform 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                M91211;
D28769;
                                                                                                                                                                                                                                                                                                                                                                                              HGNC:320; AGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB47491.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            BAA05958.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA03574.1; -.
                      100
                                                                                       404
106
215
308
99
208
301
25
81
384
67
                                                                                                                                                                                                                                                                                    Glycoprotein; Transmembrane; Repeat; Signal;
                                                                  POLY-GLU.
MISSING (IN ISOFORM 2).
GVPLPLPPSPVLILPELGPQDOGTYSCVATHSSHGPQESRA
VSISIIEPGEEGPTAGSVGGSGLGTLALALGLLGGLGTAAL
/FTId=VAR_011338
M -> G (IN REF.
                            GACRTESVGGT (IN ISOFORM 2).
                                     PGPGDPGRPGDSRPAHWGHLVAKAATPRRGEEGPRKPGGRG
                                                LIGVILWQRRORRGEERKAPENQEEEEERAELNQSEEPEAG
ESSTGGP -> VSDLERGAGRTRRGGANCRLCGRIRAGNSS
                                                                                                                 N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . .)
                                                                                                                                                        POTENTIAL.
                                                                                                                                                                           IG-LIKE C2-TYPE DOMAIN 1.
                                                                                                                                                                                                 CYTOPLASMIC (POTENTIAL). IG-LIKE V-TYPE DOMAIN.
                                                                                                                                            POTENTIAL
                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                 EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                               ADVANCED GLYCOSYLATION END PRODUCT-
SPECIFIC RECEPTOR.
                                                                                                                                                                                                                                                                      POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SHOWN HERE) AND 2/RAGESEC;
                                                                                                                              (POTENTIAL).
                                                                                                                   (POTENTIAL).
```

```
AC TISSUE-Brain;

XX MEDLINE-97157768; PubMed-9004047;

RA Wilson D.JA., Kim D.-S., Clarke G.A., Marshall-Clarke S., Moss D.J.;

RA Wilson D.JA., Kim D.-S., Clarke G.A., Marshall-Clarke S., Moss D.J.;

RT are members of the Ig superfamily and are related to OBCAM,

RT neurotrimin, LAMP and CEPU-I.";

RL J. Cell Sci. 109:3129-3138(1996).

C: FUNCTION: INHIBITS NEURITE OUTGROWTH.

C: SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.

C: SUBCELLULAR LOCATION: Attached to the membrane FROM VERY LOW

C: TISSUE SPECIFICITY: RESTRICTED TO THE NERVOUS SYSTEM.

CC: DEVELOPMENTAL STAGE: INCREASES DURING DEVELOPMENT FROM VERY LOW

CC: DEVELOPMENTAL STAGE: INCREASES DURING DEVELOPMENT FROM VERY LOW

CC: TISSUE SPECIFICITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G55A_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
-!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                     Lodge A.P., Kim D.-S., Howard M.R., McNamee C.J., Smith "Cloning of CEPU-s, a secreted isoform of CEPU-1, and OB chick: structural diversity of IgLON family proteins.", Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                  SEQUENCE OF 64-337 FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurite inhibitor GP55-A precursor (OBCAM protein gamma isoform).
Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G55A_CHICK
Q98892;
                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        390 -QSEEPEAGESSTGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276 CRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG------KPLVPNEKGVSV 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71 ----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----PTAGSYGGSGLGTLALALGILGGLGTAALLIGVILWQRR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS----PQIHWMKD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRRCCGCNCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7.2%; Score 147.5; 22.6%; Pred. No. 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42802 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0D584C436C30CCE7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             337 AA
                                                                                                                                                                                                     Marshall-Clarke S., Moss D.J., ch inhibit neurite outgrowth,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0.00012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi
                                                                                                                                                                                                                                                                                                                                                             OBCAM
                                                                                                                                                                                                                                                                                                                                                           CDNAS
                                                                                                                                                                                                                                                                                                                                                                          D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                     RESULT
NTRI_RA
                                                                                                                                                                                                                                                             В
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation between Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; Y08170; CAB41420.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                      RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  send an email to license@isb-sib.ch).
                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                               Neurotrimin precursor (GP65).
                                                                                                                             01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
                                                                                                                                                                         Q62718;
                                                                                                                                                                                                                                                                                                                                                                              141 NEGSSYTLMCLAFGRPE-----PTVTWR---HLSGKGQGFVSEDEYLE----ITGITREQ 188
                                                                                                                                                                                                                                                                                                                                                                                                         129 AENEPCEVTCL----PSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPOS 184
                                                                                                                                                                                                                                                             248 ---WFKEDTRLA 256
                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22 NATYLKGSOARFNCTVSQGWKLIMWALSDMVVL-----SVRPMEPIITNDRFTSQRYD 74
STRAIN-Sprague-Dawley
MEDLINE-95198094; Publ
                                                                                                    Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                           236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37 NVTVRQGESATLRCTVDDRVRRVAW-LNRSTILYAGNDKWSIDNRVVILSN---TKTQY- 91
                          SEQUENCE FROM N.A., AND SEQUENCE OF 217-229
                                                        NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                       ----SIKTHNVDVYDEGEYTCSVQTDNHPKTSRVH----LIVQVPPQIVNISSDITV 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QGGNFTSEMITHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFTPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SM00410; ĬG_like; 1.
SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                      SGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKNTGASVGQKGILQCEASAVPVAEFQ 247
                                                                                                                                                                                                                                                                                                                                                  NGTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVL----SSLPSLGFS 235
                                                                                                                                                                                                                                                                                             LPTWGKVGLGLA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    337 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50
150
236
133
177
277
285
                                                                        Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1g;
                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                arement is not removed. Usage by and for commercial license agreement (See http://www.isb-sib.ch/announce/
    PubMed=7891157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36887 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.4%;
                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY.

NEURITE INHIBITOR GP55-A (POTENTIAL).

REMOVED IN MATURE FORM (POTENTIAL).

IG-LIKE C2-TYPE DOWAIN 1.

IG-LIKE C2-TYPE DOMAIN 2.

IG-LIKE C2-TYPE DOMAIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 131; DB 1
Pred. No. 0.002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BAE717551856651E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GLCNAC...) (POTENTIAL).
(GLCNAC...) (POTENTIAL).
(GLCNAC...) (POTENTIAL).
(GLCNAC...) (POTENTIAL).
                                                                                                                                                                                                  344 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 337;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
```

```
THERE IS IN THE TRANSPORT OF THE TRANSPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                  В
                                                                            QΥ
                                                                                                                                                                 B
                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Struyk A.F., Canoll P.D., Wolfgang M.J., Rosen C.L., D'Eustachio P., Salzer J.L.;

"Cloning of neurotrimin defines a new subfamily of differentially

"Cloning of neural cell adhesion molecules.";

I. Neurosci. 15:2141-2156(1995).

J. Neurosci. 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; U16845; AAA67445.1; Interpro; IPR003006; Ig_MHC. Interpro; IPR003598; Ig_c2. Interpro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00047; 19; 3.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              woulled and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or.achdan.cm.il +- license.greement (See http://www.isb-sib.ch/announce/or.achdan.cm.cm.il +- license.greement (See http://www.isb-sib.ch/announce/or.achdan.cm.il +- license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunoglobulin domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                            167 EPSDLQSAVSTLALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----ODTGGGIN 221
                                                                                                                                                                                                                                                 107 GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVP 166
182 EDEYLE----IQGITREQSGEYECSAS-NDVAAPVVRRVNVTVNYPPYISEAKGTGVPVG 236
                                                                                                                                                                                                                                                                                                                                                                                                              56 ---VRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLH 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21 LLFLYPTGYPYRSGDATFPKAMDNYTYROGESATLRCTIDNRYTRVAWLNRSTILYAGND 80
                                                                                                                                                                                                                                                                                                                                  81 KWCLDPRVVLLSN---TQTQY-----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRVH 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLS--- 55
                                                                                                                                                                     ---LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR----HISPKAVGFVS 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37998 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.3%; Score 129.5; DB
34.2%; Pred. No. 0.0028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REMOVED IN MATURE FORM IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEUROTRIMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC . . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CBB39BE53B33B224 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  There are no resu
ong as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5ω
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14;
```

222 IPGVL----SSLPSLGFSLPTWGK 241

13;

```
В
                                                              DISULFID DISULFID
                   CARBOHYD
                                 CARBOHYD
                                                 CARBOHYD
                                                                                                                                                                                            Pfam; PF00047; 1g; 3.

SMART; SM00410; IG_like; 1.

SMART; SM00408; IGC2; 2.

Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                              DISULFID
                                                                                                           DOMAIN
                                                                                                                             DOMAIN
                                                                                                                                          DOMAIN
                                                                                                                                                                                         Repeat; Signal; Alternative splicing, SIGNAL 28
                                                                                                                                                           PROPEP
                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                      InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                        EMBL; Z72497; CAA96578.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
-1- ALTERNATIVE PRODUCTS: 2 ISOFORMS; A MAJOR FORM AND A MINOR FORM (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
-1- TISSUE SPECIFICITY: FOUND ON THE DEMDRITES, SOMATA AND AXONS OF DEVELOPING PURKINJE CELLS. UNDETECTABLE ON OTHER NEURONS LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "CEPU-1, a novel immunoglobulin superfamily molecule, is expressed developing cerebellar Purkinje cells.";
J. Neurosci. 16:1770-1779(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CEPU-1 protein precursor.
Gallus gallus (Chicken).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=96370549; PubMed=8774445;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Spaltmann F., Bruemmendorf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q90773;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CEPU_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     237 QKGTLQCEASAVPSAEFQ---WFK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GOLGI OR GRANULE CELLS.

DEVELOPMENTAL STAGE: EXPRESSED BY DEVELOPING CEREBELLAR PURKINJE CELLS. EXPRESSION COINCIDES WITH THE GROWTH OF THE DENDRITIC TREE ATTER PURKINJE CELLS HAVE FINISHED THEIR MIGRATION FROM THE VENTRICULAR ZONE (FROM E15 UNTIL E21). EXPRESSED IN THE ADDIT. SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUNCTION: IT MAY BE A CELLULAR ADDRESS MOLECULE SPECIFIC TO PURKING CELLS. IT MAY REPRESENT A RECEPTOR OR A SUBUNIT OF A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                      300
   IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN POTENTIAL.
                                                      POTENTIAL.
                                                                   POTENTIAL.
                                                                                                                        REMOVED IN MATURE FORM (POTENTIAL)
IG-LIKE C2-TYPE DOMAIN 1.
                                                                                                                                                            CEPU-1 PROTEIN.
                                                                                                                                                                               POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353 AA.
                                                                                                              DOMAIN
) (POTENTIAL).
) (POTENTIAL).
) (POTENTIAL).
```

```
DCC_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SO FIT
GENE STRUCTURE, AND VARIANTS CARCINOMA HIS-1375.
MEDLINE-94245241; PubMed-8188295;
Cho K.R., Oliner J.D., Simons J.W., Hedrick L., Fearon E.R.,
                                                                                Nigro J.M., Cho K.R., Feare Oliner J.D., Kinzler K.W., "Scrambled exons.";
                                                                    Cell 64:607-613(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                      SEQUENCE OF 107-472 FROM N.A. (SCRAMBELD EXONS).
MEDLINE=91121517; PubMed=1991322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                   colorectal cancers.";
Science 247:49-56(1990).
                                                                                                                                                                            "identification of a chromosome 18q gene that is altered in colorectal cancers.";
                                                                                                                                                                                                                Vogelstein B.;
                                                                                                                                                                                                                   Fearon E.R., Cho K.R., Nigro J.M., Kern S.E., Ruppert J.M., Hamilton S.R., Preisinger A.C.,
                                                                                                                                                                                                                                                  MEDLINE=90100559; PubMed=2294591;
                                                                                                                                                                                                                                                                                                 Genes Dev.
                                                                                                                                                                                                                                                                                                    "The DCC gene product in cellular differentiation and colorectal tumorigenesis.";
                                                                                                                                                                                                                                                                                                                                           Hedrick L., (
                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Tumor suppressor protein DCC precursor (Colorectal cancer suppressor).
                                                                                                                                                                                                                                                                    SEQUENCE OF 1-750 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                MEDLINE=95011532; PubMed=7926722;
Hedrick L., Cho K.R., Fearon E.R.,
                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DCC_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         253 --WYK 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237 PTWGK 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195 GEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKSTGVPVGQKGILMCEASAVPSADFQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 INEGGNVSLTCIA----TGRPDPTITWR---HISPKAVGFISEDEVLE----ITGITREQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 VAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLV 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42 NYTYROGESATLRCSYDNRYTRYAWLNRSSILYAGNDKWCLDPRYYLLANTKTQYSIQ-- 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22 NATYLKGSOARFNCTVSO-----GW---KLIMWALSDMVVLSVRPMEPIITNDRFTSORY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTLTCVATWKSLKARKSATVNLTV----IRCPQDTGGGINIPGVL----SSLPSLGFSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                              8:1174-1183(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----IHDVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVSPKITETSSDIS 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          353 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                               Fearon E.R., Kern S.E., Ruppert J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38736 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.2%; Score 128; DB 1;
25.7%; Pred. No. 0.0038;
                                                                                         Vogelstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
GPI-ANCHOR (POTENTIAL).
MISSING (IN MAJOR ISOFORM).
; 2550C48591EBBBA6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                          Wu T.-C., Kinzler K.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1447 AA
                                                                                                                                                                                                               Simons J.W.,
Thomas G., Kinzler K.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
Cancer Res. 54:3007-3010(1994).
-i- FUNCTION: IMPLICATED AS A TUMOR SUPPRESSOR GENE.
-i- SUBCELLULAR LOCATION: Type I membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    metastasis."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human esophageal squamous cell carcinomas and their relation to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Miyake S., Nagai K., Yoshino K., Oto M., Endo M., Yuasa Y., "Point mutations and allelic deletion of tumor suppressor gene DCC in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treisinger A.C., Hedge P., Silverman G.A., Vogelstein C. gene: structural analysis and mutations in co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT CARCINOMA THR-168, AND VARIANT GLY-201.
MEDLINE-94243823; PubMed-8187090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genomics 19:525-531(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                      Pfam; PF00041; fn3; 6. Pfam; PF00047; 19; 4. PRINTS; PR00014; FNTYPE
                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; A40098; A40098.
PIR; A38442; A38442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                       SMART; SM00410; IG_like; 2.
SMART; SM00408; IGC2; 3.
                                                                                                                                                                                                                          SMART; SM00060; FN3; 6
                                                                                                                                                                                                                                                                                          InterPro; IPR003600;
                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                       MIM; 120470;
                                                                                                                                                                                                                                                                                                                                                                                        Genew;
                                                               DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                              DOMAIN
                                                                                                                                CHAIN
                                                                                                                                             Repeat; Anti-oncogene;
                                                                                                                                                                           Glycoprotein;
                                DOMAIN
                                                DOMAIN
                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: FOUND IN AXONS OF THE CENTRAL AND PERIPHERAL PROPERTY OF THE INTESTINE. DISEASE: COLORECTAL TUMORS THAT LOST THEIR CAPACITY TO DIFFERENTIATE INTO MUCUS PRODUCING CELLS UNIFORMLY LACK DCC DIFFERENTIATE INTO MUCUS PRODUCING CELLS UNIFORMLY LACK DCC EXPRESSION. INACTIVATION OF DCC DUE TO ALLELIC DELETION AND/OR POINT MUTATIONS MAY CAUSE BOTH LYMPHATIC AND HEMATOGENOUS CELL CARCINOMAS.
   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation reen the Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , M32292;
; M32286;
; M32288;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      A54100; A54100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M63702;
M63718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M63696;
M63700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X76132; CAA53735.1; -. M32292; AAA35751.1; -. M32286; AAA52174.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     м63698;
                                                                                                                                                                                                                                                                                                                                                                                     HGNC:2701; DCC
                                                                                                                                                                                                                                                                                                                          IPR003961; FN_III.
IPR003962; FNIII_I
IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                           IPR003598; Ig_c2.
IPR003600; Ig_like.
     1098
1123
54
154
254
245
426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA52175.1; ALT_SEQ.

AAA52176.1; -.

AAA52177.1; -.

AAA52178.1; -.

AAA52179.1; -.

AAA52179.1; -.

AAA52180.1; -.

B; AAA52181.1; -.
                                                                                                                                                                             Immunoglobulin domain; Transmembrane; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                         TILK.
                                                                                                                                                                                                                                               FNTYPEIII.
                                                                                                                 1097
                                                                                                                                                                                                                                                                                                                          Ig_MHC.
                                                                                                                                                                 Disease mutation; Polymorphism.
                                                                                                                                                                                                                                                                                                                                               _repeat.
                    CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
                                                                                                   POTENTIAL
                                                                                                                    EXTRACELLULAR (POTENTIAL)
                                                                                                                                      TUMOR SUPPRESSOR PROTEIN DCC
                                                                                                                                                       POTENTIAL
      FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           colorectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₿.,
```

```
γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                        ρy
                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                    Вþ
RESULT 6
                                                                                                                                                                                                                            KMLS_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                       KMLS_HUMAN STANDARD;
Q15746; Q14844; Q16794; O95796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      220 SRTGNEAEVRILSDPGLHROLYFLORPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                       901179;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 40, Last sequence update)
15-JUL-2001 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Myosin light chain kinase, smooth muscle and non-muscle isozymes
Myosin light chain kinase; Telokin (Kinase related protein)
                                                                                                                                                                                                                                                                                                                                                                 324 ELTYLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG
                                                                                                                                                                                                                                                                                                                                                                                     110 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 168
                                                                                                                                                                                                                                                                         431 AP 432
                                                                                                                                                                                                                                                                                                                      383
                                                                                                                                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                                                              279 VI----
         TISSUE=Umbilical vein endotheijal cells;
MEDLINE=97304466; PubMed=9160829;
Garcia J.G.N., Lazar V.L., Gilbert-Mcclain L.I., Gallagher P.J.,
                                                                               Eukaryota; Metazoa; Chordata; Craniata; W. Mammalia; Eutheria; Primates; Catarrhini;
                                                                                                                                                                                               09UIT9;
                                           SEQUENCE FROM N.A. (ISOFORM 1)
                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                               229 LP 230
                                                                                                                                                                                                                                                                                                                                                                                                                                 52 VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 SGSGNEV-----
  Verin A.D.;
                                                                  NCBI_TaxID=9606;
                                                                                                                            KRP)
                                                                                                                                                                                                                                                                                                                     SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----VLPS
                                                                                                                                                                                                                                                                                                                                          SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS
                                                                                                                                     2.7.1.117) (MLCK) [Contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60;
                                                                                                                 OR MLCK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1447 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
161
261
352
352
299
318
478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              ----QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA
                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158456 MW;
                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MISSING (IN REF. 3).
MISSING (IN REF. 3).
MISSING (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M -> T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /FTId=VAR_003910.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /FTId=VAR_003909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /FTId=VAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    v
                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4A8612766ED0471F CRC64;
                                                                                                                                                                                                             RT; 1914 AA.
095797; 095798; 095799; Q9UBG5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GLCNAC...)
(GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   003911.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OESOPHAGEAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 1447;
                                                                                      Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARCINOMA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                  430
                                                                                                                                                                                                                                                                                                                                                                              382
```

10;

EMBL outstation

```
Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: CALCIUM/CALMODULIN-DEPENDENT ENZYME RESPONSIBLE FOR SMOOTH MUSCLE CONTRACTION VIA PHOSPHORYLATION OF A SPECIFIC SERINE IN THE N-TERMINUS OF MYOSIN LIGHT CHAINS (MLC), AN EVENT THAT DETERMINARY IN THE DEVELOPMENT OF VASCULAR PERMEABILITY AND TISSUE CONTROL THE GROWTH INITIATION OF VASCULAR PERMEABILITY AND TO SUCH THE NERVOUS SYSTEM IT HAS BEEN SHOWN TO AND TO PARCICIPATE IN TRANSMITTER RELEASE AT SYMAPSES FORMED IN SIGNALING SEQUENCES THAT RESULT IN FIEROBLAST APOPTOSIS.
-!- CATALYTIC ACTIVITY: ATP + [myosin light-chain] = ADP + [myosin light-chain] = ADP + [myosin light-chain]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watterson D.M., Schavocky J.B., Guo L., Weiss C., Chlenski A., Shrinsky V.P., Van Eldik L.J., Haiech J., "Analysis of the kinase-related protein gene found at human chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1456-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3q21 in a multi-gene cluster: organization, expression, alternative splitcing and polymorphic marker.", J. Cell. Biochem. 75:481-491(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The human myosin light chain kinase (MLCK) from hippocampus: cloning, sequencing, expression, and localization to 3qcen-q2 Genomics 29:562-570(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Lung, and Placenta; MEDLINE=20007838; PubMed=10536370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 1614-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Potier M.-C., Chelot E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Hippocampus;
MEDLINE-96121365; PubMed-8575746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 923-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=99216419; PubMed=10198165;
Lazar V.L., García J.G.N.;
"A single human myosin light chain kinase gene (MLCK; MYLK).";
Genomics 57:256-267(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               furnell W.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REVISIONS (ISOFORM 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORMS 2; 3A; 3B AND 4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birukov K.G., Garcia J.G.N.;
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Myosin light chain kinase in endothelium: molecular cloning and requiation.":
                                                                                                                                                                                                                                         light-chain] phosphate.
SUBUNIT: TELOKIN BINDS CALMODULIN.
ALTERNATIVE PRODUCTS: AT LEAST 3 ISOFORMS; A NON-MUSCLE FORM (THE LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL SECTION WITH NO CATALYTIC ACTIVITY); ARE PRODUCED BY ALTERNATIVE
              SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Respir. Cell Mol. Biol. 16:489-494(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Garcia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J.G.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pekarsky Y., Gardiner K., Rossier J.,
            PRIMTS; PRO0011; FWNTYPEIII.
PRODOM; PRO00001; Euk_pkinase; 1.
SWART; SW00060; FN3; 1.
SWART; SW00410; IG_1!ke; 1.
SWART; SW00408; IGG2; 8.
SWART; SW00220; S_TKG; 1.
SWART; SW00220; S_TKG; 1.
PROSITE; PS00107; PROTEIN_KINASE_ST; 1.
PROSITE; PS00108; PROTEIN_KINASE_DOM; 1.
PROSITE; PS0011; PROTEIN_KINASE_DOM; 1.
                                                                                                                               BINDING
ACT_SITE
DOMAIN
            REPEAT
                                                                                                  REPEAT
                                                                                                                                                                                                                                     DOMAIN
                                          REPEAT
                                                       REPEAT
                                                                     REPEAT
                                                                                     REPEAT
                                                                                                                    DOMAIN
                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                       INIT_MET
                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                 INIT_MET
                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                          ATP-binding; Phosphorylation; Immunoglobulin domain; Repeat;
                                                                                                                                                                                                                                                                                                                                                                                            Transferase; Serine/threonine-protein kinase;
                                                                                                                                                                                                                                                                                                                                                                       Alternative initiation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00047; ig; 8.
Pfam; PF00069; pkinase; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR003598;
InterPro; IPR003600;
InterPro; IPR002290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000719; Euk_pkinase
InterPro; IPR003961; FN_III
InterPro; IPR003962; FNIII_repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U48959; AAC18423.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; X90870;
; Q63450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PF00041; fn3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF096769; AAD51381.1; AF096770; AAD51381.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF096768; AAD51380.1;
AF096769; AAD51380.1;
AF096770; AAD51380.1;
AF096774; AAD54018.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AF096771; AAD51380.1; -. AF096766; AAD51380.1; JO AF096767; AAD51380.1; JO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF069604; AAD1592
X85337; CAA59685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AF069601; AAD15921 2;
AF069602; AAD15922 1;
AF069603; AAD15923 1;
AF069604; AAD15924 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF096771; AAD51381.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGNC:7590; MYLK.
                                                                                                                                                                                                                                                    1761
                                                                                                                                                                                                                                                                                                1761
                                                                                                                                                                                                                                                                                                                              923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1A06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAA62378.1; -
                                                                                                                                                                                                                                                                                                                           1914
                                                                                                                                                                                                                                                                                1914
923
                                                                                                                                                                                                                                                                                                                                                          1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig_like.
Ser_thr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FnIII_repeat.
                                                                                                                                                                                                                                                                                                                                                  Alternative splicing MYOSIN LIGHT CH
         I-5 (INCOMPLETE).
6 X 12 AA APPROXIMATE TANDEM REPEATS
II-1 (INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOINED.
JOINED.
JOINED.
                                                                                                                                                                                                CALMODULIN-BINDING
                                                                                                                                                         ATP
                                                                                                                                                                IG-LIKE C2-TYPE DOMAIN
ATP (BY SIMILARITY).
                                                                                                                                                                                                                PROTEIN KINASE
                                                                                                                                                                                                                                              MUSCLE ISOZYME FOR TELOKIN.
                                                                                                                                                                                                                                                                   FOR MYOSIN LIGHT CHAIN KINASE, SMOOTH
                                                                                                                                                                                                                                                                                                              MYOSIN LIGHT CHAIN KINASE, SMOOTH-MUSCLE
                                                                                                                                                                                                                             FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOINED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOINED
                                                                                                          X 28
                                                                                                                                    SIMILARITY.
                                                                                                                                                 (BY SIMILARITY).
                                                                                                 AA APPROXIMATE TANDEM REPEATS
                                                                                                                                                                                                                                                                                                                                             CHAIN KINASE, NON-MUSCLE
                                                                                                                                                                                                                                                                                                                                                                                         Calmodulin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restrictions on
```

```
$\text{$\tau_{\text{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tau_{\text{$\tiny_{\text{$\tau_{\text{$\tilnet{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\text{$\tiny_{\tiny_{\text{$\tiny_{\text{$\tiny_{\tiny_{\text{$\tiny_{\text{$\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\tiny_{\ti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 86
                                                                                                         밁
                                                                                                                                                              δõ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                               뮵
                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARSPLIC
CONFLICT
CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120 FI-----PSV------NLVVAENE----PCEVTCLPSHWTRLPDISWELG- 154
                                                                                                                                                                                                                                                                                                                                                                                                       207 LTVIRCPQDTGGGI-----NIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIR 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                              199 VPLQPSARVSVSEKNGMQ-VLEIHGVNQDDVGVYTCLVVNGSGKASMSAELSIQGLDSAN 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         155 LLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA-----TVN 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 144 FSASAVETRPSIWGECPPKFATKLGRVVVKEGQMGRFSCKITGRPQ-----PQVTWLKGN 198
                                                                                                                                                                                                                                                                                                                                               258 RSFVRETKATNSDVRKEVTNVISKESKLDSL-----
                                                    375 KVS 377
                                                                                                                  337
                                                                                                                                                                    319 DEOKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQR----PPRPASHPQASFNLASPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86 RGTFSLVIHAVHEEDRGKYTCEATNG--SGARQVTVELTVEGSFAKQLGQPVVSKTLGDR 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 PQNATVLKGSQARENCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGG 77
394 VVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQV------MGEL 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRNICIKEGATAKFEGRV-RGYPEPQVTWH-----RNGQPITSGGRFL---LDCGI 85
                                                                                                            VLQKTSSSITLQAARVQ----PEPRAPGLGVLSPSGEERKRPAPPRPATFPTRQPGLGSQD
                                                                                                                                                                                                                               -----EAAAKSKNCSSPQRGGSPPWAANSQPQPP-RESKLESCKDSPRTAPQTP
                                                                                                                                                                                                                                                                                    CCCCRRRCCGCNCCCFCCFRKRGFRIQFQKKSEKEKTNKETETESGNEN----SGYNS 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1433
   396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1004
1016
1028
1040
1052
437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1300
1316
1326
1478
1511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              963
1022
1048
1162
1210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1015
1027
1039
1051
1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1300
1316
1326
1478
1511
1563
1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1022
1050
1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P -> A (IN KPM -> EAH P -> L (IN L -> P (IN 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEVEVED -> MKWRCQT (IN ISOFORM 3A, ISOFORM 3B AND ISOFORM 4).
GKFGQVFRLVEKKTRKVWAGKFFKAYSAKEKENIRQEISIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VSGIPKPEVAWFLEGTBVRRQEGSIEVYEDAGSHYLCLLKA RTRDSGTYSCTASNAQGQVSCSWTLQVER -> G (IN ISOFORM 2 AND ISOFORM 3B).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MISSING (IN ISOFORM 3A AND ISOFORM 3B)
MISSING (IN ISOFORM DEL-1790).
V-> M (IN REF. 5).
S-> P (IN REF. 3) AAD15922).
P-> A (IN REF. 5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 128; DB 1; pred. No. 0.03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A -> 1
G -> 1
GY ->
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCLHHPKLVQCVDAFEEKANIVMVLEIVSGGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAD15924)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IN ISOFORM 4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD15924)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (IN REF. 5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                149; Indels 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3; AAD15922/AAD15923/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD15922/AAD15923).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAD15922/AAD15923)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD15922/AAD15923).
AAD15922/AAD15923/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                        393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
```

RESULT 7

```
DCC_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumor suppressor protein DCC precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P70211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DCC_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cooper H.M., Armes P., Britto J., Gad J., Wilks A.F.; "Cloning of the mouse homologue of the deleted in colorectal cancer gene (mDCC) and its expression in the developing mouse embryo."; oncogene 11:2243-2254(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Yertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=96112625; PubMed=8570174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORMS A; B AND C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-BALB/C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cooper H.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=BALB/c; TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                         Pfam; PF00041; fn3; 6.
Pfam; PF00047; 1g; 4.
PRINTS; PR00014; FNTYPEIII
TRANSMEM
DOMAIN
                               INIT_MET
                                                                                               Repeat;
                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                          EMBL; x85788; CAA59786.1; -.
                                                                                                                              Glycoprotein; Immunoglobulin domain; Transmembrane;
                                                                                                                                              SMART; SM00410;
SMART; SM00408;
                                                                                                                                                                             SMART; SM00060; FN3; 6
                                                                                                                                                                                                                                                             InterPro; IPR003006; InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                               InterPro;
                                                                CHAIN
                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Type I membrane protein.

ALTERNATIVE PRODUCTS: 2 isoforms; A (shown here) and B; are ALTERNATIVE PRODUCTS: 2 isoforms; A (shown here) and B; are produced by alternative initiation. A third isoform: C is produced by alternative splicing.

PRODUCED BY ALTERNATIVE EMBRYO, EXPRESSED AT HIGH LEVELS IN TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED AT HIGHLY EXPRESSED IN DEVELOPING BRAIN AND NEURAL TUBE. IN ADULT, HIGHLY EXPRESSED IN DEVELOPING BRAIN AND NEURAL TOWN IN TESTIS, HEART AND THYMUS.

BRAIN WITH VERY LOW LEVELS FOUND IN TESTIS, HEART AND THYMUS.

ISOFORM C IS EXPRESSED ONLY IN THE EMBRYO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hitted (JUN-1996) to the EMBL/GenBank/DDBJ databases. FUNCTION: IMPLICATED AS A TUMOR SUPPRESSOR GENE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEVELOPMENTAL STAGE: LOW LEVELS IN EARLY GESTATION. HIGHEST LEVELS EXPRESSED DURING MID GESTATION. LEVELS DECREASE IN LATE GESTATION AND REMAIN AT THIS LEVEL IN THE ADULT.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                               MGI:94869;
                                                                                                                                                                                                                                                                                                                                              P56276;
                                                                                                                Anti-oncogene;
                                                                                                                                                                                                                                                                                            IPR003961; FN_III.
IPR003962; FnIII_repeat.
                                                                                                                                                                                                                                               IPR003600;
   1098
1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                1TLK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Brain
                                                                                                                                                 IGc2;
                                                                                                                                                                 IG_like; 2.
   25
1447
1447
1447
1097
1122
1447
                                                                                                                                                                                                                                               Ig_c2.
Ig_like.
                                                                                                                                                                                                                                                                              Ig_MHC.
                                                                                                                  Alternative initiation; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                   TUMOR SUPPRESSOR PROTEIN DCC,
                      POTENTIAL
                                                       FOR ISOFORM B.
      CYTOPLASMIC (POTENTIAL)
                                      EXTRACELLULAR (POTENTIAL).
                                                                                                        POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1447 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                       Signal;
                                                                              ISOFORM
```

6

LACKS PROBABLY

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                     Park S.-K., Lee H.-S., Lee S.-T.; "Characterization of the human full-length PTK7 cDNA encoding a
                                                             MEDLINE-97037064; PubMed=8882711; Park S.-K., Lee H.-S., Lee S.-T.;
                                                                                                                TISSUE-Fibroblast;
                                                                                                                                                                                        Oncogene 11:2179-2184(1995).
                                                                                                                                                                                                          MEDLINE=96074849; PubMed=7478540;
Mossie K., Jallal B., Alves F., Sures I.
"Colon carcinoma kinase-4 defines a new
tyrosine kinase family.";
                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMAN
PTK7_HUMAN
                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Tyrosine-protein kinase-like 7 precursor (Col.
                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q13308; Q13417;
30-MAY-2000 (Re
                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402 AENEAGNAQSSA 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             192 ATWKSLKARKSA 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347 DIEFECAVS-GKPVPTVNWMKNGDVVIPSDYFQIVGGSNLR----ILGVVKSDEGFYQCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289 LLGG--SNLLISNVTDDDSGTYTCVVTYKNENISASAELTVLVPPWFLNHPSNLYAYESM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                     SSUE=Colon carcinoma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243 LQRPSNVIAIEGKDAVLECCVS-GYPPPSFTWLRGEEVI-----QLRSKKYS 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCV 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCK4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                154
254
345
426
525
619
722
840
941
161
161
161
261
261
261
261
261
352
352
352
318
478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
219
317
407
522
618
716
816
940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158298
                                                                                                                                                                                                                                                                                                                and Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW.
                                                                                                                                                                                                             , Sures I., Pion...
new subclass C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 127;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED (GLCNAC...)
MISSING (IN ISOFORM C).
MW; OD1F1097C22D5B9F CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1070 AA.
                                                                                                                                                                                                                                  Plowman G. ubclass of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Colon carcinoma kinase-4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
).026;
                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1447;
                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ) (POTENTIAL).
) (POTENTIAL).
) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
                                                                                                                                                                                                                                                        Ullrich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26;
                                                                                                                                                                                                                                                        Α.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                     THE TERM OF A DESCRIPTION OF THE TERM OF T
                                          DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                        PRINTS; PRO0109; TYRKINASE.

PRODOM; PD000001; Euk_pkinase; 1.

SMART; SM00410; IG_11ke; 2.

SMART; SM00408; IGG2; 5.

SMART; SM00219; TYYKC; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS00109; RECEPTOR_TYR_KIN_I; FALSE_NEG.

PROSITE; PS00239; RECEPTOR_TYR_KIN_I; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U33635; AAA87565.1; EMBL; U40271; AAC50484.2; EMBL; AF447176; AAL39062.1; EMBL; AF447157; AAL39062.1; EMBL; AF447162; AAL39062.1;
                                                                                                                                          DOMAIN
DOMAIN
                  DOMAIN
                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                     SIGNAL
                                                                                                                  DOMAIN
                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00047; ig; 7. Pfam; PF00069; pkinase; 1.
                                                                                                                                                                                                                                                                                                                     Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                             mmunoglobul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP; P08631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as round to some profit institutions as round to sage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- SÜBÜELLULAR LOCATION: Type I membrane protein.
-!- TISSUE SPECIFICITY: HIGHLY EXPRESSED IN LUNG, LIVER, PANCREAS, KIDNEY, PLACENTA AND MELANOCYTES: WEAKLY EXPRESSED IN THYROID GLAND, OVARY, BRAIN, HEART AND SKELETAL MUSCLE. ALSO EXPRESSED IN EXTHROLEUKEMIA CELLS. BUT NOT EXPRESSED IN COLON.
-!- SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. INSULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A., AND REVISION TO 834.

Lee S.-T., Park S.-K., Lee H.-S., Ji A.R., Jung J.W.;

Submitted (NOV-2001) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: MAY FUNCTION AS A CELL ADHESION MOLECULE. LACKS PROBABI

THE CATALYTIC ACTIVITY OF TYROSINE KINASE. MAY BE CONNECTED TO THE

PATHOPHYSIOLOGY OF COLON CARCINONAS AND/OR MAY REPRESENT A TUMOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      J. Biochem. 119:235-239(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           receptor protein tyrosine kinase-like molecule closely related chick KLG.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L; AF447158; AAL39062.1; J

AF447162; AAL39062.1; J

L; AF447164; AAL39062.1; J

L; AF447167; AAL39062.1; J

L; AF447170; AAL39062.1; J

L; AF447171; AAL39062.1; J

L; AF447173; AAL39062.1; J

L; AF447174; AAL39062.1; J

L; AF447174; AAL39062.1; J

L; AF447174; AAL39062.1; J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: CONTAINS 7 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RECEPTOR SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROGRESSION MARKER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HGNC:9618; PTK7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; IPR003006; Ig_MHC.
; IPR003598; Ig_c2.
; IPR003500; Ig_like.
; IPR002011; RTKinaseII.
; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                        Transmembrane; Signal; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPR000719; Euk_pkinase.
                705
726
746
143
143
239
336
426
517
                                                                                                                                                                                                                                                                                             domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAD5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 AAL39062.1 JOINED
                                                                                                                                                                                                                                     1070
                                                                                                                                                                1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tyr_pkinase.
                                                                                                                                                                                                                                                                                Repeat.
CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
IG-LIKE C2-TYPE DOMAIN 4.
IG-LIKE C2-TYPE DOMAIN 6.
                                                                                                                                                        POTENTIAL.
CYTOPLASMIC
                                                                                                                                                                                                     EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                        TYROSINE-PROTEIN KINASE-LIKE
                                                                                                                                                                                                                                                          POTENTIAL
```

DЪ δÃ Вþ Q 뫄 Š 밁 δÃ

Cell adhesion;

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
AC OCC RAP RAC RATER RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             OPCM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
DISULFID
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                         Q14982:

01-NOV-1997 (Rel. 35, Created)

01-NOV-1997 (Rel. 35, Last sequence update)

16-OCT-2001 (Rel. 40, Last annotation update)

Opioid binding protein/cell adhesion molecule precursor (OBCAM)

Opioid-binding cell adhesion molecule) (OPCML).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  227 VYLAPQDVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRATVFA---- 282
                  "Cloning, sequencing and localization to chromosome 11 of a cDNA encoding a human opioid-binding cell adhesion molecule (OBCAM)."; gene 155:213-217(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                           OPCM_HUMAN
                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                       OPCML OR OBCAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            388 VYTCHAA--NLAGORRODVNITVATVPSWLKKPODSQLEEGKPGYLDCL 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338 EE----RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY------QKGHELVLANIAESDAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130 ENEPCEVTCLPSHWTRLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSILALTPQSN-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283 ----NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLFEPRVFTAGS
                                                                                                   TISSUE-Occipital cortex;
MEDLINE-95237612; PubMed=7721093;
                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187 TLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 VIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 74
                                                                                                                                                                                    NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QGGNFTSEMIIHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELFIPSVNLVVA 129
FUNCTION: BINDS OPIOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391
481
570
664
116
175
175
184
214
214
268
283
405
567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.0%;
25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118260 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G -> E (IN REF. 2
E -> G (IN REF. 2
A -> P (IN REF. 2
S -> F (IN REF. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IG-LIKE C2-TYPE I
PROTEIN KINASE;
BY SIMILARITY.
BY SIMILARITY
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC.
P-> R (IN REF. 2 F
K-> T (IN REF. 2 F
S-> G (IN REF. 2 7
VL-> RV (IN REF. 2 7
VL-> RV (IN REF. 2 7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BY SIMILA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 124; DB pred. No. 0.031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47CDF25B8E3698A5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC...
) (GLCNAC...
) (GLCNAC...
) (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                    345 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 1070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 AND 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

OPCM_BOVIN ID OPCM_BOVEN

OPCM_BOVIN

STANDARD;

PRT;

345 AA

RESULT 10

```
QY
                                                                                                                                                                                               ΩY
                                                                                                                                                                                                                              В
                                                                                δÃ
                                                                                                             Вр
                                                                                                                                       δÃ
                                                                                                                                                                     В
                        δÃ
                                                      멍
                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INVOLVED IN CELL CONTACT.

-!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By similarity).

-!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. [GLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way use by non-profit institutions as long as its content.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - i - SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00047; ig; 3.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR003006; I9_MHC.
InterPro; IPR003598; I9_c2.
InterPro; IPR003600; I9_11ke.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MIM; 600632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; L34774; AAA36387.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROPEP
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [mmunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                              LIPID
                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                          106
                                                                                                             129 H----LIVQVPPQIMNISSDITVNEGSSVTLLCLAIGRPE-----PTVTWR------HLS 173
                          213 PODTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAG 248
                                                      174 VKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISK 228
 229
                                                                                   162
                                                                                                                                                                        80
                                                                                                                                                                                                55 ---SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 105
                                                                                                                                                                                                                              21 LLFLVPTGVPVRSGDATFPKAMDNVTVROGESATLRCTIDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                        4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---- 54
                                                                                                                                         HGSAYLTYQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                      DKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
AKNTGVSVGQKGILSCEASAVPMAEFQ----WFKEETRLATGLDG
                                                                                 YY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGNC:8143; OPCML.
                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                 345
                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                   A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27
322
                                                                                                                                                                                                                                                                                                                                                     38007 MW;
                                                                                                                                                                                                                                                                                                           25.0%;
                                                                                                                                                                                                                                                                                                                       5.8%;
                                                                                                                                                                                                                                                                                             37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REMOVED IN MATURE FORM (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                                                                                                                                                                                                                         Score 120; DB 1; Length 345; pred. No. 0.016;
                                                                                                                                                                                                                                                                                                                                                                     GPI - ANCHOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED (GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                                                     E7AD17BEA1AA3FF4 CRC64;
                                                                                                                                                                                                                                                                                             Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC . . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                        18;
```

```
밁
                                                                          δÃ
                                                                                                                                                                                                                             STREET TETTET TETTET AND DRAIN DRAIN
                                                                                                                             Matches
                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003500; Ig_like.
InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_c2; 2.
Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat; Signal.
SIGNAL 1
21 LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INVOLVED IN CELL CONTACT.

-!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
                                             4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---- 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1- FUNCTION: BINDS OPPOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cho T.M., Roy S., Lee N.M., Loh H.H., Seeburg P.H.;
"Molecular characterization of a new immunoglobulin superfamily protein with potential roles in opioid binding and cell contact.";
EMBO J. 8:489-495(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-89251576; PubMed-2721489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schofield P.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-0CT-1989 (Rel. 12, Created)
01-0CT-1989 (Rel. 12, Last sequence update)
16-0CT-2001 (Rel. 42, Last sequence update)
0pioid binding protein/cell adhesion molecule precursor (OBCAM)
(Opioid-binding cell adhesion molecule) (OPCML).
                                                                                                                                                     loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P11834;
01-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus (Bovine).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       similarity).
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S03199; S03199.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X12672; CAA31192.1; -.
                                                                                                                                             Similarity
                                                                                                                                                                                                                     345 AA;
                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28
                                                                                                                                     5.8%;
25.1%;
                                                                                                                                                                                                                  37914 MW;
                                                                                                                  36;
                                                                                                                             Score 119; DB
Pred. No. 0.02;
                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                  GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                          N-LINKED
                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REMOVED IN MATURE FORM (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE.
                                                                                                                                                                                               D1ECC8D9E7D8CB19 CRC64;
                                                                                                          Mismatches
                                                                                                                                                                                                                                                       D (GLCNAC...) (PROBABLE).
D (GLCNAC...) (POTENTIAL).
                                                                                                                                                     DB 1; Length 345;
                                                                                                          103;
                                                                                                                                                                                                                                                     ·) (POTENTIAL)
                                                                                                       Indels
                                                                                                  70;
                                                                                                  Gaps
                                                                                                  17;
```

```
OPCM_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                    EMBL;
       InterPro;
Pfam; PF0(
                              InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
                                                                 PIR; JC1239; JC1239.
                                                                                                               EMBL; M88710; AAA40859.1; -.
                                                                                                                                     modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                       "Cloning of neurotrimin defines a new subfamily of differentially expressed neural cell adhesion molecules.";
J. Neurosci. 15:2141-2156(1995),
-i- FUNCTION: BINDS OPICION. IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                           -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY, IGLON
                                                                                                                                                                                                                                                                                                                    INVOLVED IN CELL CONTACT.

-!- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.

-!- ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND 2

MAY BE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Struyk A.F., Canoll P.D., Wolfgang M.J., Rosen C.L., D'Eustachio P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=92347701; PubMed=1339369;
Lippman D.A., Lee N.M., Loh H.H.;
"Opioid-binding cell adhesion molecule (OBCAM)-related clones from a
rat brain cDNA library.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 195-214, AND GPI-ANCHOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P32736; Q01654; P32735; Q01653;
01-JUL-1993 (Rel. 26, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Opioid binding protein/cell adhesion molecule precursor (OBCAM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Opioid-binding cell adhesion molecule) (OPCML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPCM_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   229 AKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    213 PQDTGGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 VKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106 HGSAYLTVQVMGELFTPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80 DKWSIDERVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55 ---SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 105
 PF00047; ig;
                                                                             M88709; AAA40858.1; -.
                                                                                                 М88711; ААА40860.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H----LIVQVPDQIMNISSDVTVNEGSSVTLLCLAIGRPE-----PTVTWR------HLS 173
IPR003600; Ig_like.
0047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murinae; Rattus
```

SMART; SM00410; IG_like; 1. SMART; SM00408; IGC2; 2.

[mmunoglobulin domain; Cell

Signal; Alternative

Repeat;

SOUTH SET TO THE SET OF THE SET O

DISULFID

DOMAIN DOMAIN DOMAIN PROPEP CHAIN

CARBOHYD

CARBOHYD

DISULFID

CARBOHYD

δÃ

21

Query Match Best Local : Matches

71; Conservative

Similarity

24.78; 5.7%; SEQUENCE VARSPLIC CARBOHYD CARBOHYD

345 AA;

38067 MW;

Š 밁

Ş 밁

멍 20 В

õ 밁

RESULT 12

CHICK

STANDARD; 40,

NEO1_CHICK STAN 090610; 16-OCT-2001 (Rel. 4 16-OCT-2001 (Rel. 4 15-JUN-2002 (Rel. 4

Created)

Gallus gallus (Chicken). Neogenin (Fragment)

SEQUENCE FROM N.A.

NCBI_TaxID=9031;

11;

way

```
Vielmetter J., Roman J.M., Dreyer W.J.;

Weogenin, an avian cell surface protein expressed during 
Neogenin, an avian cell surface protein expressed to the human 
neuronal differentiation, is closely related to the human 
suppressor molecule deleted in colorectal cancer.";

J. Cell Biol. 127:2009-2020(1994).

J. Cell Biol. 127:2009-2020(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           106 HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                  129 H----LIVQVPPQIMNISSDITVNEISSVTLLCLAIGRPE-----PTVTWR------HLS
                                                                        STRAIN-White leghorn; TISSUE-Embryonic brain; MEDLINE-95105243; PubMed-7806578;
                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasiani
                                                                                                                                                                                                                                                                                                                            229 AKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLATGLDGVRI 272
                                                                                                                                                                                                                                                                                                                                                     213 PQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAGTML 251
                                                                                                                                                                                                                                                                                                                                                                              174 VKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISK 228
                                                                                                                                                                                                                                                                                                                                                                                                       162 YY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80 DKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             55 ---SVRPMEPIITNDRFTSORYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARENCTVSQGWKLIMWALSDMVVL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTTDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                            40, Last sequence update)
41, Last annotation update)
                                                                                                                                                                                                                          Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   splicing.
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REMOVED IN MATURE FORM
IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGVCGYLFLPWKCLVVVSLRLLFLVPT ->
SATTALLFIP (IN ISOFORM 2).
; A3181B0753F9658E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 118;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL
                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                            Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                     1443 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MYHPAYWIVF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                             Qy
                                                       Оy
                                                                                   В
                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                      Matches
                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commer entities required.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U07644; AAC59662.1; -. HSSP; P11276; 2MFN.
                                                                                                                                                                                                                                                                                                                      DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00047; 19; 4.
PRINTS; PR00014; FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00041; fn3; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Interpro; IPR003598; Ig_c2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003961; FN_III.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART;
                                                                                                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR003600;
                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                265 LRAGGS----LLISDVTEEDVGTYTCIADNENETIEAQAELAVQVPPEFLKRPANIYAHE
                                                                                     218
                                                                                                              17
                                                                                                                                                    Local
                                                         -DQGGNETSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAE 130
                                                                                  VRQPSSLTKVTGQNAVFPC-VAGGFPTPYVRWTKNG
                                                                                                             IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRY- 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SM00410; IG_like; 2.
SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SM00060; FN3;
                                                                                                                                         49;
                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR003962; FnIII_repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1091
                                                                                                                                                                                           1443 AA;
                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunoglobulin domain; Glycoprotein; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11111
1443
                                                                                                                                                                                                                                                                                                                                                                  1037
                                                                                                                                                                                                         894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ig_like
                                                                                                                                                        26.2%;
                                                                                                                                                                                            158050 MW;
                                                                                                                                                                   5.7%;
                                                                                                                                                                                                                                                                                                                                                                                                     IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
                                                                                                                                             28;
                                                                                                                                                                                                                                                             N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                         FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                         Score 117.5; D
                                                                                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                                                                                                                                                                                                    FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                    N-LINKED
                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                     N-LINKED
                                                                                                                                                                                                                                                                                                                 BY SIMILARITY
                                                                                                                                                                                                            N-LINKED
                                                                                                                                                                                                                          N-LINKED
                                                                                                                                                                                                                                                                                                                                                      SIMILARITY.
                                                                                                                                                                                                                                                                                                                               SIMILARITY
                                                                                                                                                                                                                                                                                                                                           SIMILARITY.
                                                                                                                                             Mismatches
                                                                                                                                                                                               (GLCNAC...
                                                                                                                                                                                                                                                                                         (GLCNAC.
                                                                                                                                                                                                                          (GLCNAC. .
                                                                                                                                                                                                                                      (GLCNAC
                                                                                                                                                                       DB 1;
                                                                                                                                                73;
                                                                                                                                                 Indels
                                                                                                                                                                         Length 1443;
                                                                                                                                                                                                     CRC64;
                                                                                                EELITED --
                                                                                                                                                                                                                                                                 (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for commercial
                                                                                                                                                    37:
                                                                                                 -SERFA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FIBERS
                                                                                                                                                    Gaps
```

밁 Ş 뫄

```
RESULT 13
PGBM_HUMAN
                                                                                           SEQUENCE OF 1-21 FROM N.A.
MEDLINE-94052171; PubMed-8234307;
Cohen I.R., Graessel S., Murdoch A.D., Tozzo R.V.;
"Structural characterization of the complete human perlecan gene
                                                                                  Proc
                                                                                                                                                                                                                    "Cloning of human heparan sulfate proteoglycan core protein, assignment of the gene (HSPG2) to 1p36.1-->p35 and identific
                                                                                                                                                                                                                                                                                                                                                                           cloning, cellular expression, and short arm of human chromosome 1.";
                                                                                                                                                                                               Genomics 11:389-396(199ĭ).
                                                                                                                                                                                                                                                                    Kallunki P., Eddy R.L., Byers M.G., Kestila M., Shows T.B.,
                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 892-1398 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-91365376; PubMed-1679749;
Dodge G.R., Kovalszky I., Chu M.L., Hassell J.R., McBride O.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murdoch A.D., Dodge G.R., Cohen I., Tuan R.S., Iozzo R.V., "Primary Structure of the human heparan sulfate proteoglycan from basement membrane (HSPG2/perlecan). A Chimeric molecule with multiple domains homologous to the low density lipoprotein receptor, laminin, neural cell adhesion molecules, and epidermal growth factor."; J., Biol. Chem. 267:8544-8557(1992).
                                                                                                                                                                                                                                                                                              MEDLINE=92120660; PubMed=1685141;
                                                                                                                                                                                                                                                                                                                   TISSUE=Fibrosarcoma;
                                                                                                                                                                                                                                                                                                                                                                 Genomics 10:673-680(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1018-1472 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                         "Heparan sulfate proteoglycan of human colon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wallunki P., Tryggvason K.;

"Human basement membrane heparan sulfate proteoglycan core protein: a 467-kD protein containing multiple domains resembling elements of the low density lipoprotein receptor, laminin, neural cell adhesion molecules, and epidermal growth factor.";

J. Cell Biol. 116:559-571(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P98160; 016287;
01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Basement membrane-specific heparan sulfate proteoglycan core
protein precursor (HSPG) (Perlecan) (PLC).
                                                                                                                                                                                                               BamHI restriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=92235084; PubMed=1569102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=92112994; PubMed=1730768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGBM_HUMAN
              FUNCTION: This protein is an integral component of basement membranes. It is responsible for the fixed negative electrostatic charge and is involved in the charge-selective ultrafiltration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         372 GFYQCIA 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
                                                                    Natl. Acad. Sci. U.S.A. 90:10404-10408(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMDIVFECEVTGKPT-----PTVKWVKNGDVVIPSDYFKIVKEHNLQ-----VLGLVKSDE 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NE----PCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTLTCVA 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and Colon;
          It serves as an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                           fragment length
                                                                                                                                                                                                                                                                                                                                                                                    and mapping of the gene (HSPG2)
attachment substrate for cells
                                                                                                                                                                                                        polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                        partial molecular
                                                                                                                                                                                                                  and identification
                                                                                                                                                                                                                                                                                                                                                                                      to the
```

```
PROSITE; PS00022; EGF 1; 9.

PROSITE; PS01186; EGF 2; 5.

PROSITE; PS01248; LAMININ_TYPE_EGF; 11

PROSITE; PS0025; LAM_DOMAIN; 3.

PROSITE; PS01209; LDLRA 1; 4.

PROSITE; PS50068; LDLRA 2; 4.

PROSITE; PS50024; SEA; 1.
                                                                                                                                                                     ProDom; PD003031; Laminin_B; 3.

SMART; SM00180; EGF_Lam; 6.

SWART; SM00001; EGF_1Lke; 8.

SWART; SM00001; EGF_1Lke; 8.

SWART; SM00192; LDLa; 4.

SWART; SM00281; LamB; 3.

SWART; SM00282; LamG; 3.

SMART; SM00280; SEA; 1.

PB0517FF, SM00200; SEA; 1.
  DOMAIN
                                            Extracellular matrix;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; X62515; CAA44373.1;
EMBL; M85289; AAA52700.1;
EMBL; M44283; AAA52699.1;
EMBL; S76436; AAB21121.2;
EMBL; L22078; -; NOT_ANNOTATED,
HSSP; P00740; IEDM.
Siena-2DPAGE; P98160;
                                                            Heparan
                                                                                                                                                                                                                                                                                    Pfam; PF00057; Pfam; PF01390;
                                                                                                                                                                                                                                                                                                                         Pfam;
Pfam;
                                                                                                                                                                                                                                                                       PRINTS; PR00010; EGFBLOOD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MIM; 142461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew;
                                                                                                                                                                                                                                                                                                                                                                                     [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        +
                                                                                                                                                                                                                                                                                                                         PF00052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Extracellular.
TISSUE SPECIFICITY: FOUND IN THE BASEMENT MEMBRANES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PTM: CONTAINS THREE HEPARAN SULFATE CHAINS AS WELL AS N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                membrane components such as laminin, prolargin and collagen type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBUNIT: Purified perlecan has a strong tendency to aggregate in dimers or stellate structures. It interacts with other basement
                                                Basement membrane; Proteoglycan; Repeat; Glycoprotein; sulfate; Laminin EGF-like domain; Immunoglobulin domai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGNC:5273; HSPG2
                                                                                                                                                                                                                                                                                                                                                                J; IPR000742; EGF_2.
J; IPR001438; EGF_II.
J; IPR001398; IG_C2.
J; IPR003198; Ig_C2.
J; IPR002172; LDL_recept_A.
J; IPR0000934; Laminin_B.
J; IPR002049; Laminin_EGF.
J; IPR001791; Laminin_G.
J; IPR001791; Laminin_G.
J; IPR001082; SEA_domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR000561;
80
                                                                                                                                                                                                                                                                                                                                              EGF; 4.
ig; 22.
                                                                                                                                                                                                                                                                                     laminin_G; 3.
ldl_recept_a; 4.
SEA; 1.
                                                                                                                                                                                                                                                                                                                     laminin_EGF;
                       4393
                                                                                                                                                                                                                                                                                                                                 aminin_B; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOT_ANNOTATED_CDS.
194
                                           EGF-like domain.
                                                                                                                                                                                                                                                                                                                , 7.
SULFATE PROTEOGLYCAN CORE PROTEIN
             BASEMENT MEMBRANE-SPECIFIC HEPARAN
                                POTENTIAL.
                                                 domain;
```

```
B
                Q
                                               Query Match
Best Local :
                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                          DISULFID
                                                                                                               DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                 SITE
                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                             DISULFID
                                                                                                       DISULFID
                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                     DOMAIN
3030 PPSSTVQQGQDASFKCLIHDGAAPISLEWKTRNQELEDNVHIS--PNGSIIT-----
                  20 PQNATVLKGSQARFNCTVSQG-----WKLIMWALSDMVVLSVRPMEPIITNDRFTSQR 72
                                                Similarity
                                                                                                                                                                 4301
                                                                            199
206
219
285
292
304
325
332
                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           1127
1160
1210
1227
1326
1336
1531
1564
1672
1672
1672
1672
1773
1867
2053
                                                                                                                                                                                                                                                             3300
3401
3490
3576
3664
3845
3883
                                                                                                                                                                 4303
                                               5.6%;
                                                                                                                                                                                                                                                                                       LAMININ EGF-LIKE 10.

LAMININ EGF-LIKE 11.

IG-LIKE C2-TYPE DOMAIN 2.

IG-LIKE C2-TYPE DOMAIN 3.

IG-LIKE C2-TYPE DOMAIN 4.

IG-LIKE C2-TYPE DOMAIN 5.

IG-LIKE C2-TYPE DOMAIN 7.

IG-LIKE C2-TYPE DOMAIN 7.

IG-LIKE C2-TYPE DOMAIN 7.

IG-LIKE C2-TYPE DOMAIN 10.

IG-LIKE C2-TYPE DOMAIN 11.

IG-LIKE C2-TYPE DOMAIN 11.

IG-LIKE C2-TYPE DOMAIN 11.

IG-LIKE C2-TYPE DOMAIN 11.

IG-LIKE C2-TYPE DOMAIN 13.

IG-LIKE C2-TYPE DOMAIN 15.

IG-LIKE C2-TYPE DOMAIN 15.

IG-LIKE C2-TYPE DOMAIN 16.

IG-LIKE C2-TYPE DOMAIN 16.

IG-LIKE C2-TYPE DOMAIN 18.

IG-LIKE C2-TYPE DOMAIN 19.

IG-LIKE C2-TYPE DOMAIN 19.

IG-LIKE C2-TYPE DOMAIN 19.

IG-LIKE C2-TYPE DOMAIN 19.

IG-LIKE C2-TYPE DOMAIN 20.

IG-LIKE C2-TYPE DOMAIN 21.

IG-LIKE C2-TYPE DOMAIN 21.
                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LAMININ
LAMININ
LAMININ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LDL-RECEPTOR CLASS A 1.
LDL-RECEPTOR CLASS A 2.
LDL-RECEPTOR CLASS A 3.
LDL-RECEPTOR CLASS A 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LAMININ EGF-LIKE 1 (N-TERMINAL).
LAMININ DOMAIN IV.1 (DOMAIN III A).
LAMININ EGF-LIKE 1 (C-TERMINAL).
LAMININ EGF-LIKE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IG-LIKE C2-TYPE DOMAIN 1
                                                                                                                                                                 HEPARAN SULFATE (POTENTIAL).
HEPARAN SULFATE (POTENTIAL).
HEPARAN SULFATE (POTENTIAL).
MEDIATES MOTOR NEURON ATTACHMENT
(POTENTIAL).
                                                Score 116; DB pred. No. 0.77;
                                                                              LAMININ G-LIKE 2
                                                                                                                                                      (POTENTIAL)
                                                                            Y SIMILARITY.
                                                                                                                                               SIMILARITY.
                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VALUE EGF-LIKE 9 (N-TERMINAL).
VIN DOMAIN IV 3 (DOMAIN III C).
VIN EGF-LIKE 9 (C-TERMINAL).
VIN EGF-LIKE 10.
VIN EGF-LIKE 11.
VIN EGF-LIKE 11.
                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EGF-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EGF-LIKE 4 (INCOMPLETE).
EGF-LIKE 5 (N-TERMINAL).
DOMAIN IV 2 (DOMAIN III B).
EGF-LIKE 5 (C-TERMINAL).
                                                                                                                                                                                                                                                                                  G-LIKE
                                                                                                                                                                                                                          G-LIKE 3
                                                           1;
                                         72;
                                                           Length 4393;
                                         Indels
                                          72;
                                         Gaps
     3079
                                           10;
```

```
RESULT 14
NEO1_HUMAN
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NEO1_HUMAN STANDARD; PRT; 1461 AA 092859; 000340; 16-0CT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3171 VLQISSAKPSDAGTYVCLAQNALGTAQKQVEVIV------DTG 3207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMAN
                                                                                                                                                                                                                                                                                                                                                                           Genomics 41:414-421(1997).

Genomics 41:414-421(1997).

Genomics 41:414-421(1997).

FUNCTION: MAY BE INVOLVED AS A REGULATORY PROTEIN IN THE TRANSITION OF UNDIFFERENTIATED PROLIFERATING CELLS TO THEIR TRANSITION OF UNDIFFERENTIATED STATE. MAY ALSO FUNCTION AS A CELL ADHESION DIFFERENTIATED STATE. MAY ALSO FUNCTION AND ADULT TISSUES.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- SUBCELLULAR LOCATION: Type I membrane protein.

-!- ALIERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND ARE PRODUCED BY ALIERNATIVE SPLICING.

ARE PRODUCED BY ALIERNATIVE SPLICING.

-!- TISSUE SPECIFICITY: WIDELY EXPRESSED AND ALSO IN CANCER CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vielmetter J., Chen X.-N., Miskevich F., Lane R.P., Yamakawa
Korenberg J.R., Dreyer W.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Fetal brain;
MEDLINE-97236653; PubMed-9121761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                            the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by an
entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Fetal brain; MEDLINE=97312699; PubMed=9169140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neogenin precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 AVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Oncogene 14:1129-1136(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Identification and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Meyerhardt J.A., Look A.T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                      EMBL; U61262; AAB17263.1;
EMBL; U72391; AAC51287.1;
HSSP; P02751; lTTF.
                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Molecular characterization of human neogenin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73 YDQGGNFTSEMIIHNVEPSDSGNIRC-----SLQNSRLHGSAYLTVQVMGELFI- 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---PSVNL-VVAENEPCEVTCLPSHWTRLPDISWEL-----GLLVSHSSYYFVPEPSDLQS 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----IVGTRPSNHGTYRCVASNAYGVAQSVVNLSVHGPPTVSVLPEGPVWVK 3127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VGKAVTLECVSAGEPRS----SARWTRISSTPAKLEQRTYGLMDSH----
                                                                                                                                                                                                                                                                                                                                                               LINES.
                                                                                                                                                                                                                                                                                  SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                           SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the mapping of its gene (NEO1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR NGN.
                                                                                                                                                                                                                                                                                                                             SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bigner S.H., Fearon E
erization of neogenin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              an neogenin, a DCC-related protein, to chromosomal position 15q22.3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1461 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                          (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fearon E.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a DCC-related
                                                                                                                                                                                  and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>۳</u>
                                                                                                                                                                                    commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                     2
```

MIM; 601907;

InterPro;

IPR003961; FN_III

Genew; HGNC:7754; NEO1.

```
RAGE_BOVIN
                                RESULT 15
                                                                 밁
                                                                                     Š
                                                                                                            밁
                                                                                                                               Q
                                                                                                                                                       B
                                                                                                                                                                         Qy
                                                                                                                                                                                                  Db
                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                        Matches
RAGE_BOVIN
Q28173;
                                                           422 GAQL-IILEHAPATTGPLPSAPRDVVASLVSTRFIKLTW 459
                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                               202 SATVNLTVIRCPODTGGGINIP-GVLSSLPSLGFSLPTW 239
                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                              311 TEDDAGTYFCIADNGNETIEAQAELTVQAQPEFLKQPTNIYAHESMDIVFECEVTGKPT-
                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                        255 PSPLVRVIGQDVVLPCVASGLPTPTIKWMKNEEALDTESSERLVLLAGGS----LEISDV 310
                                                                                                                                                                                                                                    203 SGMLVI---SNAT--EGDGGLYRCVVESGGPP---KYSDEVELKVLPDPEVISDLVFLKQ 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Iransmemu.....Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003600; ICP Pfam; PF00041; fn3; 6. Pfam; PF00047; ig; 4. PRINTS; PR00014; FNTYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                   89 EPSDSGNIRCSLQNSR--LHGSAYLTVQVMGELFIPSVNLVVAENE----PCEVTCLPSH 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
InterPro;
                                                                                                                                                                                                                       66 -----
                                                                                                                                                                                                                                                        12 SGNEVIEGPONATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                 Local
                                                                                                  ----PTVKWVKNGDMVIPSDYFKIVKEHNLQ----VLGLVKSDEGFYQCIAENDVGNAQA 421
                                                                                                                        WTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARK 20:
                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SM00060; FN3; 6.
                                                                                                                                                                                                                                                                                                                              1248 13
168 1
1461 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR003962; FnIII_repeat. IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003598;
                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunoglobulin domain; Glycoprotein; Signal; Repeat;
                                                                                                                                                                                                                                                                                                                                           1300
168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829
950
1052
                                                                                                                                                                                                                                                                                            5.6%; Score 114.5; D
24.4%; Pred. No. 0.27;
                                                                                                                                                                                                                                                                                                                               159958 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Ig_c2.
; Ig_like.
                                                                                                                                                                                                                ------DRFTSQRYD--QGGNFTSEMIIHNV 88
                                                                                                                                                                                                                                                                                 31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IG-LIKE C2-TYPE DOMAIN 1
IG-LIKE C2-TYPE DOMAIN 2
IG-LIKE C2-TYPE DOMAIN 3
IG-LIKE C2-TYPE DOMAIN 3
IG-LIKE C2-TYPE DOMAIN 4
FIBRONECTIN TYPE-III 1
FIBRONECTIN TYPE-III 2
FIBRONECTIN TYPE-III 4
FIBRONECTIN TYPE-III 5
FIBRONECTIN TYPE-III 5
FIBRONECTIN TYPE-III 6
                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                   BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
       PRT;
                                                                                                                                                                                                                                                                                                                                     MISSING (IN ISOFORM 2).

G -> N (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POLY-VAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY.
                                                                                                                                                                                                                                                                                                                            7AAE897E69635A21 CRC64;
        416 AA
                                                                                                                                                                                                                                                                                                                                                                                       D (GLCNAC. . .)
D (GLCNAC. . .)
D (GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                         GLCNAC. .
                                                                                                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                                                                                                                 107; Indels
                                                                                                                                                                                                                                                                                                     Length 1461;
                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                73;
                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                           65
                                                                                                                                                                                                                                                                               13;
```

```
Ş
                                          밁
                                                                                                                                                                                                                                          Matches
                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                          DISULFID DISULFID
                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its mon-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
        119
                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART;
                            176 TKRHPKTGLFTLHSELM----VTPARGGALHPTFSCSFTPGLPRRRALHTAPIQLRVWSEH 232
                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                               Immunoglobulin domain; Glycoprotein; Transmembrane; Repeat; Signal SIGNAL 1 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SUBCELLULAR LOCATION: Type I membrane protein.
-!- TISSUE SPECIFICITY: ENDOTHELIAL CELLS.
-!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
-!- SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
-!- SIMILARITY: CONTAINS 2 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neeper M., Schmidt A.M., Brett J., Yan S.D., Wang F., Pan Y.C., Elliston K., Stern D., Shaw A.;

"Cloning and expression of a cell surface receptor for advanced glycosylation end products of proteins.";

J. Biol. Chem. 267:14998-15004(1992).

"I FUNCTION: MEDIATES INTERACTIONS OF ADVANCED GLYCOSYLATION END PRODUCTS (AGE). THESE ARE NOMENZYMATICALLY GLYCOSYLATED PROTEINS WHICH ACCUMULATE IN VASCULAR TISSUE IN AGING AND AT AN ACCELERATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR003600; Ig_like, Pfam; PF00047; 1g; 2. SMART; SM004410; IG_Like; 1. SMART; SM00408; IGC2; 1. SMART; SM00408; IGC2; 1. SMART; PS00290; IG_MHC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M91212; AAA03575.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Advanced glycosylation end product-specific receptor precursor (Receptor for advanced glycosylation end products).
                                                            70 SQRYDQGGNFT--SEMIIHNVEPSDSGNIR----CS----LQNSRLHGSAYLTVQVMGE- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=92340547; PubMed=1378843;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9913;
                                                                                                                        Local Similarity
   RATE IN DIABETES.
                                                                                                                                                                        416 AA;
                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Bovine).
                                                                                                                                                                      44182 MW;
                                                                                                                   23.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                       5.5%;
                                                                                                       35;
                                                                                                                 Score 113.5; DB Pred. No. 0.069;
                                                                                                                                                                                      POLY-GLU
                                                                                                                                                                                               N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                     CYTOPLASMIC (POTENTIAL).
IG-LIKE V-TYPE DOMAIN.
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                            POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                      EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                          ADVANCED GLYCOSYLATION END PRODUCT-
SPECIFIC RECEPTOR.
                                                                                                                                                                   B703815573E767AE CRC64;
                                                                                                     Mismatches
------CEVTCLPS---HWTR----LP 147
                                                                                                                                 DB 1;
                                                                                                 87;
                                                                                                 Indels 127;
                                                                                                                                 Length 416;
                                                                                              Gaps
                                                                                               18;
```

Sear Job	DЬ	Qγ	В	Qy	Ъ	VQ	Вb	Qy	Db
Search completed: April 28, 2003, 18:09:37 Job time : 18.2617 secs	405EPEAAESSTGGP 416	326 TASLPPKSCESSDPEQRNSSCGPP 349		266 RRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTD 325	329 TIETGEEGTTAGSVEGPGLETLALTIGILGGLGTVALLIGVIVW 3/3	208 TVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCC 265	290LPPGPMLLLPEVGPEDQGTYSCVATHPSHGPQESKAVSV 320	148 DISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNL 207	::

		•		
		••		
	· .		÷ .	

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                     Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                               Searched:
                                                                      Database :
                                                                                                                                                                                                                                                                                                                                                                                                                              April 28, 2003, 18:09:54; Search time 18.8683 Seconds (without alignments) 1946.300 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                         US-09-729-264-2
2059
PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                 283224 seqs, 96134422 residues
                                                                                                                                                                                                                                                                                                                                                      1 MGLVIFLHGSGSGNEVIEGP......HPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
```

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

3 4 4 6 6 7 7 10 11 11 12 13 14 14 17 18 19 19 19 10 11 11 11 11 11 11 11 11 11	1 2	Result No.
129.5 129.5 128.7 127.5 127.5 125.5 125.5 126.1 126.1 127.5 129.1 129.1 139.1 131.5	1	Score
VAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	7.2	Query Match L
164 344 1447 871 8871 8871 1070 1189 345 345 345 345 345 345 345 345 345 347 348 348 349 349 349 349 349 349 349 349 349 349	- 1	Length DB
2 1545/2 2 1545/2 2 1545/2 2 148696 1 148696 1 148697 2 1729757 2 1729757 2 172659 2 1715690 2 171690 2 171690 2 171690 2 171690 2 1716593 2 1716593		Ħ
425522338824566666666666666666666666666666666666		, , , , ,
neurotrimin - rat tumor suppressor p protein-tyrosine k protein-tyrosine k protein tyrosine k protein-tyrosine k hypothetical prote opioid-binding pro opioid-binding pro neogenin - chicken opioid-binding pro neogenin - chicken opioid-binding pro neogenin - chicken opioid-binding pro perlecan precursor hypothetical prote advanced glycosyla irregular chiasm C sodium-dependent p Schwann cell myeli hypothetical prote insulin-like growt butyrophilin - mou receptor tyrosine heparan sulfate pr hypothetical prote heparan sulfate pr hypothetical prote heparan sulfate pr hypothetical prote	advanced glycosyla tumor suppressor - hypothetical prote	Description

44	4 4 4 4	<u>.</u>	40	39	3 8	37	36	G G	34	ω ω	32	ω 1	30	
102	102	102.5	102.5	102.5	102.5	102.5	102.5	103.5	104	104	104.5	106	106.5	
ர். 0,0	5.0	л U		5.0	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.2	
868 898	721	365	1455	1273	789	423		890	2282	2222	862	1092	946	
μ Ν	N	N	٦ ٧	N	N	N	۸ د) -	۸ د	۸ د	N) 	<u> </u>	•
A46512 JC4166	T41530	JC7780	120788	T4 24 05	128/14	6 # C 6 7 I.	BOOK AO	A00/40	11211	T10117	149000	JNOSSO	A4 / 299	
protein-tyrosine k	nyporherical procedure from	coxsackie- and ade	mannose 6-phosphat	hypothetical prote	sax-3 protein - Ca	hypothetical prote	hypothetical prote	amalgam protein pr	protein-tyrosine k	polyprotein - fava	sdk protein - frui	differentiation an	neural cell adhesi	ror-related recept

ALIGNMENTS

ŧ

Query Match 7.2%; Score 147.5; DB 1; Length 404;	Alternate names advanced glycosylation end products receptor plecularly. KAlternate names advanced glycosylation end product binding protein, 35K; glycoprot (Species; Homo saplens (man)) C.Species; Homo saplens (man) C.Species; Gawy 1965; 842879; S27968 R.Sugyy K.K.; Pakagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Sugyy K.K.; Pakagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Sugyy K.K.; Pakagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Sugyy K.K.; Pakagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Sugyy K.K.; Pakagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Paragawa, T; Matsumoto, K.; Mita, K.; Takahashi, R.; Paragawa, T; Mita, K.; Paragawa, Mita, K.; Paragawa, Mita, Mita	

```
RESULT 3
T24272
                                                                                                                                                                                 В
                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                             묽
                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Gene: XDCCa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:U10986; NID:g606873; PIDN:AAA70168.1; PID:g606874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-1427 <PIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Pierceall, W.E.; Reale, M.A.; Candia, A.F.; Wright, C.V.; Cho, K.R.; Fearon, E.R. Dev. Biol. 165, 654-665, 1994
A;Title: Expression of a homologue of the deleted in colorectal cancer (DCC) gene in the A;Reference number: IS1668; MUID:95113183; PMID:7813784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor suppressor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
I51669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                  398 YQCIAENEAGNIQTYAQLIIPDPAVPSSSILPSAPRDV-----VPVLVSS 442
                                                                                                                    188 LTCVA-----TWKSLKARKSATVNLTVI-RCPQDTGGGINIPGVLSS 228
                                                                                                                                                         347 DIEFECAVSGKPS-----PTVKWTKNGEVVIPSDYFQIVDGSNLR----ILGLVKSDEGY 397
                                                                                                                                                                                           133 PCEVTCL----PSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGT 187
                                                                                                                                                                                                                                 289 VLGG--SNLLISNVTDDDAGAYTCVATYKNENTSFSÅDLTVMVPPQFLNHPANLYAYESM 346
                                                                                                                                                                                                                                                                                                            243 LQRPSNVVAIEGQDAVLECAVS-GYPTPTIVWMQGD-----EPVPIRTR----KYS 288
                                                                                                                                                                                                                                                                     75 QGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                                              17 IEGPQNATVLKGSOARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     390 -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             367 ------ GRRGEERKAPENQEEEEERAELN------ 389
                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    328 -----PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR----- 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                276 CRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        223 PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRRCCGCNCC 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            275 -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG----- 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   231 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS----PQIHWMKD----- 274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 IP----SWNIVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRALRTAPTQPRVW 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG-----KPLVPNEKGVSV 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               71 ----ORYDOGGNFT---SEMIIHNVEPSDSGNIR----CSLONSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                          6.5%; Score 133; DB 2
25.7%; Pred. No. 0.088;
ative 33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22.6%; pred. No. 0.0019;
ative 40; Mismatches 114; Indels 137; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 1427;
                                                                                                                                                                                                                                                                                                                                                                                    90; Indels 48; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
δõ
                                        뭥
                                                                      QУ
                                                                                                              В
                                                                                                                                                Qγ
                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ζŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Sims,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
```

```
C; Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-ter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Struyk, A.F.; Canoll, P.D.; Wolfgang, M.J.; Rosen, C.L.; D'Eustachio, P.; Salzer, J. Neurosci. 15, 2141-2156, 1995
A;Title: Cloning of neurotrimin defines a new subfamily of differentially expressed na;Reference number: 156551; MUID:95198094; PMID:7891157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:U16845; NID:g755184; PIDN:AAA67445.1; PID:g755185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-344 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C:Species: Rattus norvegicus (Norway rat)
C:Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 19-May-2000
C:Accession: 156551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neurotrimin - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Introns: 20/3; 90/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: CESP:T01B7.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source: clone T01B7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL;Z66499;_PIDN:CAA91301.1; GSPDB:GN00020; CESP:T01B7.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-164 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein T01B7.8 - Caenorhabditis elegans c;Species: Caenorhabditis elegans c;Species: Caenorhabditis elegans c;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: Z19867
A; Accession: T24272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    submitted to the EMBL Data Library, October 1995
                                     182 EDEYLE----IQGITREQSGEYECSAS-NDVAAPVVRRVNVTVNYPPYISEAKGTGVPVG 236
222 IPGVL----SSLPSLGFSLPTWGK 241
                                                                                     167 EPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGIN 221
                                                                                                                                         130 ----LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR----HISPKAVGFVS 181
                                                                                                                                                                                               107 GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVP 166
                                                                                                                                                                                                                                                  81 KWCLDPRVVLLSN---TQTQY-----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRVH 129
                                                                                                                                                                                                                                                                                                         56 ---VRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLH 106
                                                                                                                                                                                                                                                                                                                                                            21 LLELVPTGVPVRSGDATFPKAMDNVTVROGESATLRCTIDNRVTRVAWLNRSTILYAGND 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102 CRTCCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                               4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARENCTVSQGWKLIMWALSDMVVLS--- 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      273 --NCCC-RCCFCCR 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                213 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          153 LGLLVSHSSYYFVÞEÞSDLQSAVSILALTÞQSNGTLTCVATWKSLKARKSATVNLTVIRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 KRQGGCGCCGCGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 LAILLAIGTFIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.3%; Score 129.5; DB 24.2%; Pred. No. 0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.3%; Score 129.5; DB 2; Length 164;
32.1%; Pred. No. 0.015;
htive 11; Mismatches 53; Indels 27; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43; Mismatches 104; Indels 53; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --GCCGCGGGGG--CGCCCRPRCCCCCRRCCTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
```

g

```
C;Accession: A54100: A40098
R;Hedrick, L.; Cho, K.R.; Fearon, E.R.; Wu, T.C.; Kinzler, K.W.; Vogelstein, B. Genes Dev. 8, 1174-1183, 1994
A;Title: The DCC gene product in cellular differentiation and colorectal tumorigenesis. A;Reference number: A54100; MUID:95011532; PMID:7926722
A;Accession: A54100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Homo sapiens (man)
C;Date: 02-Aug-1994 #sequence_revision 02-Aug-1994 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tumor suppressor protein DCC precursor - human N;Alternate names: colorectal cancer suppressor DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-750 <FEA>
A;Cross-references: GB:M32292; NID:g181492; PIDN:AAA35751.1; PID:g181493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Keywords: transmembrane protein; tumor suppressor F;1-25/Domain: signal sequence #status predicted <SIG>F;26-1447/Product: tumor suppressor protein DCC #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Cross-references: GDB:119838; OMIM:120470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: GDB: DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Map position: 18q21.1-18q21.
                                                                                                                     protein-tyrosine kinase (BC 2.7.1.112) nsk2 precursor, splice form 2 - mouse N.Alternate names: receptor-type tyrosine kinase N.Contains: protein-tyrosine kinase nsk2 precursor, splice form 4 C.Species: Mus musculus (house mouse) C.Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 19-May-2000 C.Accession: 148696; S60738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
R;Ganju, P.; Walls, E.; Brennan, J.; Reith, A.D. oncogene 11, 281-290, 1995
A;Title: Cloning and developmental expression of Nsk2, a novel receptor tyrosine kinase A;Reference number: I48696; MUID:95349951; PMID:7624144
A;Accession: I48696
                                                                                                                                                                                                                                                                                                       RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            324 ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS------VLPS 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52 VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 SGSGNEV-----IEGPQNATVLKGSQARENCTVSQGW--KLIMWALSDM 51
                                                                                                                                                                                                                                                                                                                                                                               431 AP 432
                                                                                                                                                                                                                                                                                                                                                                                                                               229 LP 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VI-----QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.2%; Score 128; DB 24.8%; Pred. No. 0.21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2; Length 1447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
```

```
A;Cross-references: MGI:103308
C;Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase ho C;Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; t C;Keywords: Signal sequence #status predicted <SIG>
F;1-21/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Experimental source: splice form 4 C; Comment: For alternate splice forms see PIR:I48697. C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-456, 'A', 466-871 <GAN2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Experimental source: splice form 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: EMBL:X86444; NID:g929723; PIDN:CAA60165.1; PID:g929724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Residues: 1-871 <GAN1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: nucleic acid sequence not shown; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;22-871/Product: protein tyrosine kinase nsk2, splice form 2 #status predicted <MAT2 F;22-456,'A',466-871/Product: protein tyrosine kinase nsk2, splice form 4 #status pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: EMBL: X86444; NID: 9929723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: S60738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;135-192/Domain: immunoglobulin homology <IMM2>
F;135-192/Domain: immunoglobulin homology <IMM3>
F;226-284/Domain: immunoglobulin homology <IMM3>
F;498-518/Domain: transmembrane #status predicted <TRM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;42-101/Domain: immunoglobulin homology < IMM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;575-865/Domain: protein kinase homology <KIN>
F;583-591/Region: protein kinase ATP-binding motif
F;222,462/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                        맑
                                                                                                                                                      Qy
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                              δÃ
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                       172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122 KITRPPINVKIIEGLKÄVLPCTTMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
                                                                                                                                                                                                                                                                                                                                                                    129 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                                                                                                                                                                              184 SNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQDTGGGINIPG-----V 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 73
  389 VVPTPMPICREYCLAVKELFCAK 411
                                                  274 -----CCCRCC-----FCCR 283
                                                                                                     336 LVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAAEALLCYHLFLECSPG 388
                                                                                                                                                        226 LSSLPSLGESLP-----TWGKYGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-- 273
                                                                                                                                                                                                              278 --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQYRGEGVLMQGPGEKML 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 DQGGNFTSEMITHNVEPSDSGNIRCSLONSRLHGSAY----LTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ocal Similarity
                                                                                                                                                                                                                                                                                                                    TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.2%; Score 127.5; D
21.7%; Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87; Gaps
```

RESULT 7

148697

148697

protein-tyrosine kinase (EC 2.7.1.112) nsk2 precursor, splice form.1 - mouse protein-tyrosine kinase kinase N; Alternate names: receptor-type tyrosine kinase N; Splice form 3

N; Contains: protein-tyrosine kinase nsk2 precursor, splice form 3

N; Contains: protein-tyrosine kinase nsk2 precursor, splice form 3

N; Contains: protein-tyrosine kinase nsk2 precursor, splice form 3

N; Contains: protein-tyrosine kinase nsk2 precursor, splice form 3

N; Contains: protein-tyrosine mouse)

C; Species: nwaserulus (house mouse)

C; Species: nwaserulus (house mouse)

C; Date: 19-May-2000 #text_change 19-May-2000

R; Gate: 19-May-2000 #text_change 19-May-2000

R

```
A:Map position: 1
A:Introns: 17/2; 108/3; 154/2; 211/2; 265/3; 326/2; 352/3; 426/2; 454/1; 500/1; 537/1;
/3; 5917/1; 6027/1; 6061/3; 6153/2; 6515/1; 6552/3; 6609/1
                                                                                                               A; Gene: CESP:unc-89
                                                                                                                                           A; Experimental source: strain Bristol N2; clone C09D1
                                                                                                                                                                                                                                                                                                                      R;Du, Z.; Le, T.T.; Wilson, R. submitted to the EMBL Data Library, May 1997 A;Description: The sequence of C. elegans cosmid C09D1.
                                                                                                                                                                                                                                                                                                                                                                                                              protein UNC-89 - Caenorhabditis elegans
C:Species: Caenorhabditis elegans
C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 03-Dec-1999
                                                                                                                                                                                                                                                                                      A; Reference number: Z20679
A; Accession: T29757
                                                                                                                                                                                                                                                                     A;Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                Status: preliminary; translated from GB/EMBL/DDBJ
,Molecule type: DNA
,Residues: 1-6642 <DUZ>
,Residues: 1-6642 <DUZ>
,Cross-references: EMBL,AF003131; PIDN:AAB54132.1; GSPDB:GN00019; CESP:unc-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F:583-591/Region: protein kinase ATP-binding motif F:222,462/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;575-865/Domain: protein kinase homology <KIN>F;583-591/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;498-518/Domain: transmembrane #status predicted <TRN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;135-192/Domain: immunoglobulin homology <TMM2>F;226-284/Domain: immunoglobulin homology <TMM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C:Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; tyrc F;1-21/Domain: signal sequence #status predicted <SIC>
F;22-881/Product: protein tyrosine kinase nsk2, splice form 1 #status predicted <MAT1>
F;22-456; A, 466-881/Product: protein tyrosine kinase nsk2, splice form 3 #status predicted <MAT1>
F;42-101/Domain: immunoglobulin homology <IMM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: MGI:103308
C;Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase homol
C;Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; tyrc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:X86445; NID:g929725
A:Experimental source: splice form 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-456, 'A', 466-881 <GAN2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A:Experimental source: splice form 1 A;Accession: S60740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Comment: For alternate splice forms see PIR:I48696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  389 VVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                274 ------CCCRCC-----FCCR 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 336 LVFLPTTSHRDPEDAQELLIHTAWNEL------KAVSPLCRPAAEALLCYHLFLECSPG 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  226 LSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCCCN-- 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   278 --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQYRGEGVLMQGPGEKML 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184 SNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQDTGGGGINIPG-----V 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       129 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        224 TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY----LTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.2%; Score 127.5;
21.7%; Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41; Mismatches 125; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
```

```
g
                                                                                                                                  В
                                                                                                                                                                                  Q
                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase hom C;Superfamily: unassigned Ser/Thr or Tyr-specific protein; phosphotransferase; t F;31-00/Domain: signal sequence #status predicted <SIG>
F;31-1070/Product: protein-tycosine kinase 7 #status predicted <MAT>
F;31-703/Domain: extracellular #status predicted <EXC>
F;704-725/Domain: transmembrane #status predicted <TMAS-
F;726-1070/Domain: intracellular #status predicted <TMAS-
F;794-1065/Domain: protein kinase homology <KIN>
F;116,175,184,214,268,283,405,463,567,646/Binding site: carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: mrNA
A;Molecule type: mrNA
A;Residues: 1-1070 cpAp>
A;Cross-references: GB:U40271; NID:g1322231; PIDN:AAC50484.1; PID:g1322232
C;Comment: This protein is a member of receptor protein tyrosine kinase family, but_p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GDB:134760; OMIM:601890
A;Map position: 6p21.1-6p12.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: Characterization of the human full-length PTK7 cDNA encoding a receptor prot A;Reference number: JC4593; MUID:97037064; PMID:8882711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N;Alternate names: receptor protein tyrosine kinase-like protein (RPTK) C;Species: Homo sapiens (man) C;Date: 16-Apr_1996 #sequence_revision 24-May-1996 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein-tyrosine kinase related receptor PTK7 precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ОÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Park, S.K.; Lee, H.S.; Lee, S.T.
Biochem. 119, 235-239, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 23.9%; Pred. No. 1.6;
388 VYTCHAA--NLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCL 434
                                                                                                    338 EE---RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY-----QKGHELVLANIAESDAG
                                                    187 TLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL 229
                                                                                                                                                   130 ENEPCEVTCLPSHWTRLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSILALTPQSN-G 186
                                                                                                                                                                                                        283 -----NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLFEPRVFTAGS 337
                                                                                                                                                                                                                                                                                                            227 VVLAPODVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRATVFA---- 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2240 SGTLTAKAKNAAGECETSAKVTVNGGNKKPEFVQAPQN 2277
                                                                                                                                                                                                                                                       75 QGGNFTSEMIIHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELFIPSVNLVVA 129
                                                                                                                                                                                                                                                                                                                                                               16 VIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2183 DEGEPLRWNLELDGPSPGT---EVSWLLNGQPLTKSDTVQVVDHGDGTYHVTIAEAKPEM 2239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2132 -----LKISNAKIEQTGTVKVTAQNSAGQDSKQADLKVEPNVKAPKFKSQLTDKVA 2182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2077 VVDGPKSVTIKETETAEFKATIS-GFPAPTVKWTINEKIVEESRTITTIKTEDVYT---- 2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         185 NGTLTCVATWKSLKARKSATVNLT-----VIRCPQD 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  129 AENEPCEVTCL---PSHWTRLPDISWEL-GLLVSHSSYYFVPEPSDLQSAVSILALTPQS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GDB:PTK7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      74 DQGGNFTSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELFIPS-----VNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 VIEGPONATVLKGSOARENCTVSOGW--KLIMWALSDMVVLSVRBMEPIITNDRFTSORY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.0%; Score 124; DB 25.3%; Pred. No. 0.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                    32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 103; Indels 36; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 6642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35; Gaps
                                                                                                       387
                                                                                                                                                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

```
RESULT 10
T15651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             submitted to the EMBL Data Library, May 1996
A;Description: The sequence of C. elegans cosmid C27A2.
A;Reference number: Z18382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999 C;Accession: T15651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: JC4025
R;Shark, K.B.; Lee, N.M.
Gene 155, 213-317, 1995
A;Title: Cloning, sequencing and localization to chromosome A;Reference number: JC4025; MUID:95237612; PMID:7721093
A;Accession: JC4025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:U58760; NID:g1330384; PID:g1330389; PIDN:AAB00710.1; GSPDB:GN0CA;Experimental source: strain Bristol N2; clone C27A2 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-188 <NHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R; Nhan, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: 2
A; Introns: 19/3; 91/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein C27A2.5 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: T15651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             opioid-binding cell adhesion protein - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: CESP:C27A2.5
Ş
                                          밁
                                                                              δÃ
                                                                                                                               밁
                                                                                                                                                                     Š
                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position: 11pter-11qter
C; Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene: GDB:OPCML; OBCAM; OPCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Gross-references: GB:L34774; NID:g514373; PIDN:AAA36387.1; PID:g514374
A;Experimental source: brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-345 < SHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GDB:251677; OMIM:600632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Species: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;Comment: This protein binds opioid alkaloids in the presence of acidic lipids, exhibit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Species: Homo sapiens (man)
Date: 13-Jun-1995 #sequence_revision 14-Jul-1995 #text_change 17-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              256 CTLTIRCCCCRRRCCGC--NCCC-RCCFCCR 283
                                          174 VKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISK 228
                                                                                                                               129 H----LIVQVPPQIMNISSDITVNEGSSVTLLCLAIGRPE-----PTVTWR------HLS 173
                                                                                                                                                                        106 HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
  213 PQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAG
                                                                                     162 YY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                   21 LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                             4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCRPKCCCCCRRCCTCCRTCCTCCR 116
                                                                                                                                                                                                                DKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                                           ---SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.9%;
                                                                                                                                                                                                                                                                                                                                                                                                          5.8%;
25.0%;
                                                                                                                                                                                                                                                                                                                                                                                          37; Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 122.5; DB Pred. No. 0.059;
                                                                                                                                                                                                                                                                                                                                                                                                            Score 120; DB pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 of a cDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                               74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a huma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-345 <SCH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: S03199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                 밁
                                                                     Ş
                                                                                                                                                                                                         C; Keywords:
                                                                                                                                                                                                                                                                                                            A; Accession: JC1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                    Matches
                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                               21 LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                             Local
                                                                       4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---- 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70;
```

```
C;Accession: S03199
R;Schofield, P.R.; McFarland, K.C.; Hayflick, J.S.; Wilcox, J.N.; Cho, T.M.; Roy, S.; EMBO J. 8, 489-495, 1989
A;Title: Molecular characterization of a new immunoglobulin superfamily protein with A;Reference number: S03199; MUID:89251576; PMID:2721489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C:Species: Bos primigenius taurus (cattle)
C:Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 17-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;1-27/Domain: signal sequence *status predicted <SIG> F;28-345/Product: opioid-binding protein OPCAM *status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: carcinoembryonic antigen;
C;Keywords: transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               opioid-binding protein OPCAM precursor - bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:X12672; NID:g585; PIDN:CAA31192.1; PID:g586
                                                                                                                                                                                                                                                                                                                                                                                                                               opioid-binding protein (clones SG8 and SG13) - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 03-May-1994 #sequence_revision 03-May-1994 C;Accession: JC1239
                                                                                                                                             C; Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-ter
                                                                                                                                                                           A;Cross-references: GB:M88710; NID:9203247; PIDN:AAA40859.1; PID:9203248; GB:M88711;
                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 1-345 <LIP>
                                                                                                                                                                                                                                                                                                        A; Title: Opioid-binding cell adhesion molecule (OBCAM)-related clones from a rat brai A; Reference number: JC1238; MUID:92347701; PMID:1339369
                                                                                                                                                                                                                                                                                                                                                                          R; Lippman, D.A.; Lee, N.M.; Loh, H.H. Gene 117, 249-254, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229 AKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEETRLATGLDG 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162 YY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRC 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106 HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSS 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229 AKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 VKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80 DKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 LLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 VIFLHGSG----SGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---SVRPMEPIITNDRFTSQRYDQGGNFTSEMITHNVEPSDSGNIRCSLQ-----NSRL 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H----LIVQVPPQIMNISSDVTVNEGSSVTLLCLAIGRPE-----PTVTWR------HLS 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PQDTGGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.8%;
Similarity 25.1%;
                                                                                                                         transmembrane protein
                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
Conservative
                                5.7%;
24.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36;
      38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 119; DB Pred. No. 0.2;
                                Score 118; DB 2; Pred. No. 0.24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
   Mismatches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-May-1994 #text_change 19-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 carcinoembryonic antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  103; Indels
                                                              Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     precursor amino-ter
```

Gaps

Gaps

17;

S

```
Search completed: April 28, 2003, 21:08:48 Job time: 26.8683 secs
                                                                                                                                     Вb
                                                                                                                                                                     QΥ
                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                             Query Match 5.7%; Score 116.5; DB 2; Length 338; Best Local Similarity 25.0%; Pred. No. 0.31; Matches 66; Conservative 33; Mismatches 96; Indels 69; Gaps
                                                               245 AEFQ---WFKEDTRLATGLDGVRI 265
                                                                                    232 LGFSLPTWGK----VGLGLAGTML 251
                                                                                                                          186 KRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISKAKNTGVSVGQKGILSCEASAVPM 244
                                                                                                                                                            181 TPQSNGTLTCVATWKSLKARKSATVNLTV----IRCPQDTGGGINIPGVL----SSLPS 231
                                                                                                                                                                                           141 NEISSVTLLCLAIGRPE-----PTVTWR------HLSVKEGQGEVSEDEYLE----ISDI 185
                                                                                                                                                                                                                           129 AENEPCEVTCL----PSHWTRLPDISWELGLLVSHSSYY----FVPEPSDLQSAVSILAL 180
                                                                                                                                                                                                                                                            16;
```

OM protein - protein search, using sw model

GenCore version 5.1.4_p5_4578 copyright (c) 1993 - 2003 compugen Ltd.

April 29, 2003, 11:05:56 ; Search time 18.8683 Seconds

(without alignments)
1622.277 Million cell updates/sec

Run on:

Title: perfect score:

US-09-729-264-2 2059

1 MGLVIFLHGSGSGNEVIEGP......HPQASFNLASPEKVSNTTVV 382

Scoring table: Sequence:

BLOSUM62

Total number of hits satisfying chosen parameters:

301932 seqs, 80129803 residues Gapop 10.0 , Gapext 0.5

Minimum DB seq length: 0
Maximum DB seq length: 200000000 Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 summaries Published_Applications_AA:*

Database :

Result ŏ

Score

Query Match

Length DB

Description

19;

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

5: 6: 7: 8: 9: 10: 11: 12: 13: 14:

rumineu_ppineu_rum_can;

/ggn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US06_EUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US06_EUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*

/ggn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

/ggn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

55 66 77 79 99 110 111 111 112 113 113 114 115 116 118

US-08-755-235-4
US-10-184-644-559
US-10-114-634-559
US-10-176-758-584
US-10-175-737-584
US-10-175-737-584
US-10-176-752-584
US-10-176-757-584
US-10-176-757-584
US-10-176-913-584
US-10-176-913-584
US-10-180-557-584
US-10-174-757-584
US-10-174-757-584
US-10-174-757-584
US-10-174-757-584
US-10-174-757-584
US-10-174-757-584

δÃ g

222 IPGVLSSLPSLGESLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRECCGCNC 274 275 -GVPLPLPPSBVLILPEIGPODOGTYSCVATHSSHGPQESRAVVSISIIE-PGEEG----

US-10-174-582-584 US-10-174-588-584

```
Sequence 4, Appli
Sequence 559, App
Sequence 584, App
                                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.1
SEQ ID NO 4
LENGTH: 405
TYPE: PRT
ORGANISM: Human
US-08-755-235-4
                                                                                                                                                                                                                                                                                                                                                                                    US-08-755-235-4
                                                                                                                                                                                                                                                                                                                                                                                              RESULT 1
                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/08755235 publication No. US20030059423A1 GENERAL INFORMATION:
                                                                                                                                                                  δÃ
                                                                                                                             QY
                                                                                                                                                Дb
                                                                         밁
                                                                                         Qγ
                                                                                                             Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 6.9%; Score 142; DB 1; Length 405; Best Local Similarity 22.8%; Pred. No. 0.0048;
                                                                                                                                                                                                                                                                                APPLICANT: Schmidt, Ann Marie
APPLICANT: Wu, Jun
APPLICANT: Wu, Jun
APPLICANT: Wu, Jun
APPLICANT: Wu, Jun
APPLICANT: WI, Jun
EINVENTION: METHOD FOR TREATING SYMPTOMS OF DIABETES
FILE REFERENCE: 0575/50159
FILE REFERENCE: 0575/50159
FILE REFERENCE: 0575/50159
FILE REFERENCE: 1996-11-22
CURRENT FILING DATE: 1996-11-22
NUMBER OF SEQ ID NOS: 4
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                      APPLICANT: Stern, David M.
APPLICANT: Schmidt, Ann Marie
                                                                                                                                                                                       Matches
                                                                                                                                                 125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG------KPLVPNEKGVSV 173
                                                                                                             174 KEQTERHPETGLFTLQSELM --- VTPARGGDPRPTFSCSFSPGLPRHRALRTAPTQPRVW 230
                                                                                           121 IP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                       163 YFVPEPSDLQSAVSILALTPOSNGTLTCVATWKSLKARKS-ATVNLTVIRCPQDTGGGIN 221
                                                                         231 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD------ 274
                                                                                                                               71 ---- QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                   15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIIINDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        99999999
                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-175-739-584
US-10-175-740-584
US-10-175-743-584
US-10-176-48-584
US-10-176-747-584
US-10-176-798-584
US-10-176-987-584
US-10-176-987-584
US-10-176-991-584
US-10-176-993-584
US-10-176-93-584
US-10-173-695-584
US-10-173-695-584
US-10-173-695-584
US-10-174-585-584
US-10-174-585-584
US-10-176-487-584
                                                                                                                                                                                           40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                                                                                                                                                              113; Indels 138; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
```

```
US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-184-644-559
                                                                                                                                                                                                                                Sequence 559, Applic
Publication No. US20
GENERAL INFORMATION:
                                                                                                                                                           APPLICANT:
                                                                                                                                                                                        APPLICANT:
        APPLICANT: Zhang,Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C217
CURRENT APPLICATION NUMBER: US/10/184,634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 2
US-10-184-644-559
                                                                                                                                                                                                               APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                    APPLICANT:
                                                                                                    APPLICANT:
                                                                                                                 APPLICANT:
                                                                                                                                 APPLICANT:
                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/184,644
CURRENT FILING DATE: 2002-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C227
                                                                                                                                                                                                                                                                                                                        2308 -----ATTCCTCATCGCCCACCCCACCCCGGCCCCACCACC 2344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                     2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                           239 WGKVGLGLAGTMLLTPTCTLTIRCCCCR-RRCCGCNCCCRCCFCC 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 2473
                                                                                                                                                                                                                                                                                                                                                                                                          179 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                391 -- OSEEPEAGESSTGGP 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            333 SCESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            368 ----- QRRGEERKAPENQEEEEERAELN----- 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      275 CCRCCFCCRKRGFRIQFQKKSEKEKT---NKETETESGNENSGYNSDEQKTTDTASLPPK 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  329 ------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR----- 367
                                                                            Pan, James
Smith, Victoria
Watanabe, Colin K.
Wood, William I.
                                                                                                                                                      Goddard, Audrey
Godowski, Paul J.
                                                                                                                                      Gurney, Austin L.
                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                        Chen, Jian
                                                                                                                                                                                                                                                         Application US/10184634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Godowski, Paul J.
Gurney, Austin L.
Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen, Jian
                                                                                                                                                                                                                                          ŪS20030068684A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10184644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P3430R1C227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US20030044930A1
                                                                                                                                                                                                                                                                                                                                                                                                                                              6.7%; Score 138.5; DB 29.5%; Pred. No. 0.071; ative 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _DB 9; Length 2473;
                                                                                                                                                                                                                                                                                                                                                                                                                                        36; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                ---- 2307
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
RESULT 5
                                                                                                                     Ъ
                                                                                                                                                    δÃ
                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo Sapien US-10-174-590-584
                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION INVARIANT US/10/174,590
CURRENT FILING DATE: 2002-06-18
Prior application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-174-590-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 584, Application US/10174590 Publication No. US20030008352A1
                           180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
SEQ ID NO 559
LENGTH: 2473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                            168 -- PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                         125 APOVLGG----PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHOTLLKE 179
                                                                                                                         114 -- QVMGELFIPSVNI,VVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE:
                                                                                                                                                           68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECOATOAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                         63 ITNDRFTSORYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                             13 LFCFRGRAGDSPHFLOQPEDLVVLLGEEARLPCALGAYWGLVOWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2308 -----ATTCCTCATCGCCCACCCCACCCCGGCCCCACCACC 2344
                                                                                                                                                                                                                                                  3 LVIFLHGSGSGNEVIEGPQNATVIKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                               / Match
Local Similarity 23.8%; Pred. No. 0.026;
les 55; Conservative 40; Mismatches 106; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              239 WGKVGLGLAGTMLLTPTCTLTIRCCCCR-RRCCGCNCCCRCCFCC 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        179 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 29.5%; Score 138.5; DB Pred. No. 0.071; Pes 31; Conservative 3. Wirmon, 1.071;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-06-28

 Mismatches

                                                                                                                                                                                                                                                                                                                                DB 9; Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9; Length 2473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36; Indels
                                                                                                                                                                                                                                                                                            30; Gaps
                                                                                                                                                                                                                                                                                              10;
```

```
US-10-176-758-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-176-758-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication No. US20030008353A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/176,758 CURRENT FILING DATE: 2002-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                sequence 584, Application US/10175737 publication No. US20030013153A1
                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P.
                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C50
                                                      CURRENT APPLICATION NUMBER: US/10/175,737 CURRENT FILING DATE: 2002-06-19
                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114 --QVMGELFIPSYNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          168 -- PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 ITNDRFTSORYDOGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECOATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski,Paul J.
Gurney,Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application_US/10176758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pan, James
                                                                                                                                                                                                                                                                                             Desnoyers, Luc
                                                                                                                                                                                                                                         Gurney, Austin L.
                                                                                                                                                                                                                                                          Godowski, Paul J.
                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                    Watanabe, Colin K.
                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                         Pan, James
                                                                                                                                                                                                                                                                                                                   Chen, Jian
                                                                                                                                                                       Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.6%; Score 136; DB 9; Length 708; 23.8%; Pred. No. 0.026;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40; Mismatches 106; Indels 30; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
```

```
; TYPE: PRT; ORGANISM: Homo Sapien US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 7
US-10-173-706-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                          US-10-173-706-584
                                                                                                                                                    οy
                                                                                                                                                                                            Dр
                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 584, Application US/10173706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/173,706 CURRENT FILING DATE: 2002-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                               Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125 APOVLOG---PSVSLVA--GVPANLTCRSRGDARPTPELLWERDGVLLDGATEHCTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.6%; Score 136; DB 9; Length 708; Local Similarity 23.8%; Pred. No. 0.026; nes 55; Conservative 40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 GTPGSVESTLTLTEFSHDDGATFVCRARSQALPTGRDTATTLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 168 --PSDLOSAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPODT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63 ITNDRFTSORYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
   168 --PSDLOSAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 215
                                           125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWERDGVLLDGATFH@TLLKE 179
                                                                                 114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                    68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                      63 ITNDRFTSORYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                          13 LFCFRGRAGPSPHFLOOPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGOR----- 67
                                                                                                                                                                                                                             3 LVIFLHGSGSGNEVIEGPONATVLKGSQARFNCTVSQGWKLIMMALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative 40; Mismatches 106; Indels 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wood, William I.
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US20030022293A1
                                                                                                                                                                                                                                                                                           6.6%; Score 136; DB 9; Length 708; 23.8%; pred. No. 0.026;
                                                                                                                                                                                                                                                                             40; Mismatches 106; Indels 30; .Gaps
_
_
_
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
```

밁

```
RESULT 9
US-10-175-752-584
                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Homo Sapien US-10-175-738-584
                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                  Sequence 584, Appropriation No.
CURRENT APPLICATION NUMBER: US/10/175,752
                APPLICANT: Zhang,Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C60
                                                                                                                                                                                                      APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian APPLICANT: Desnoyers, Luc Desnoyers, Luc
                                                                           APPLICANT:
                                                                                             APPLICANT:
                                                                                                                                                                           APPLICANT:
                                                                                                                               APPLICANT:
                                                                                                                                               APPLICANT:
                                                                                                                                                              APPLICANT:
                                                                                                                                                                                               APPLICANT:
                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-10-175-738-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC FILE REFERENCE: 23430R1C45
CURRENT APLICATION NUMBER: US/10/175,738
CURRENT FILING DATE: 2002-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prior application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                     180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                      168 -- PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                     125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      114 --QVMGELFIDSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECOATOAGLRSRPAOLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 LFCFRGRAGPSPHFLOOPEDLVVLLGEEARLPCALGAYWGLVOWTKSGLALGGOR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'Match 6.6%; Score 136; DB 9; Length 708;
Local Similarity 23.8%; Pred. No. 0.026;
les 55; Conservative 40; Mismatches 106; Indels 30; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                      Godowski, Paul J. Gurney, Austin L.
                                                                                      Watanabe, Colin K. Wood, William I.
                                                                                                                       Smith, Victoria
                                                                                                                                               Pan, James
                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                               Application US/10175752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chen, Jian
                                                                                                                                                                                                                                                                          ŪS20030022295A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10175738
5. US20030022294A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
```

```
망
                                                                                                              QΥ
                                                                                                                                                     В
                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                              US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo Sapien US-10-175-752-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 584, p
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/176,482 CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                         Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audre
                                                                                                                                                                                                                                                                                                           ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 584
LENGTH: 708
114 --QVMGELFIDSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT FILING DATE: 2002-06-19
                                                     68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECOATQAGLRSRPAQLHVLVPPE 124
                                                                                        63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                          13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                                                                           3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                        Local Similarity es 55; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168 -- PSDLOSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHOTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114 -- QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 ---DLPGWSRYWISGNAANGOHDLHIRPVELEDEASYECOATOAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 ITNDRFTSQRYDQGGNFTS---EMITHNVEDSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13 LFCFRGRAGDSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang,Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan, James
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10176482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US20030022296A1
                                                                                                                                                                                               6.6%; Score 136; DB 9; Length 708;
23.8%; Pred. No. 0.026;
ative 40; Mismatches 106; Indels 30; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.6%; Score 136; DB 9; Length 708; 23.8%; Pred. No. 0.026;

    See File Wrapper or Palm

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40; Mismatches 106; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30; Gaps
                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-176-757-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo Sapien US-10-176-757-584
                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                             US-10-176-913-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 584, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                     Sequence 584, Application US/10176913
                                                                                                                                                                                                                    GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                      Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prior Application removed - See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/176,757
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 612
                                                                                                                                      APPLICANT:
                                                                                                                                                         APPLICANT:
                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                           APPLICANT:
                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                     180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                         168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114 -- QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63 ITNDRFTSQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       55,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 6.6%; Score 136; DB 9; Length 708; Similarity 23.8%; Pred. No. 0.026;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
                                                                                                                                                                                             Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/10176757
  Zhang, Zemin
                      Watanabe, Colin K. Wood, William I.
                                                                                               Gurney, Austin L.
                                                                                                                      Godowski, Paul
                                                                                                                                      Goddard, Audrey
                                                                                                                                                       Desnoyers, Luc
                                                                                                                                                                             Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                             Smith, Victoria
                                                                               Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US20030022297A1
                                                                                                                                                                                                                                  US20030022298A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
```

```
GRGANISM: Homo Sapien US-10-176-913-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-180-552-584
    VQ
                                            밁
                                                                                                                                                                                                      US-10-180-552-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed - See file Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 584, Appublication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/176,913
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                         SEQ ID NO 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                Query Match
                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT FILING DATE: 2002-06-25
                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                                                                                                                                                                                                                        Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                 LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALFTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTY----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 LFCFRGRAGESPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLIV----- 113
                                            13
                                                                                                                       Match 6.6%; Score 136; DB 9; Length 708; Local Similarity 23.8%; Pred. No. 0.026; es 55; Conservative 40; Mismatches 106; Indels
                                                                                   3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                          LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Desnoyers, Luc
Goddard, Audrey
Godowski, Paul J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10180552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US20030022300A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.6%;
23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 136; DB 9
Pred. No. 0.026;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9; Length 708;
                                                                                                                                    106; Indels 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                          10;
```

```
US-10-173-700-584
                                                                                                                                                                                                                                                                                                                     QV
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-180-557-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-180-557-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                      Sequence 584, Application US/10173700 Publication No. US20030027262A1
                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 584
LENGTH: 708
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Publication No. US20
GENERAL INFORMATION:
  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 584, Application US/10180557
Publication No. US20030022301A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P3430R1C147
CURRENT APPLICATION NUMBER: US/10/180,557
CURRENT FILING DATE: 2002-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                   180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                        168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                              125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                 114 -- QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                         68 ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                             63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68 ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                      Desnoyers, Luc
Goddard, Audrey
              Godowski, Paul J. Gurney, Austin L.
Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski,Paul J.
Gurney,Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40; Mismatches 106; Indels 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
```

```
밁
                                                                                                                                                                  δõ
                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo Sapien US-10-173-700-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Watanabe, Colin K.
APPLICANT: Wood, William I.
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/173,700 CURRENT FILING DATE: 2002-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
180 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                 125 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKE 179
                                                                                                                                               114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                     68 ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 124
                                                                                                                                                                                                                                                      63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV---- 113
                                                                                                                                                                                                                                                                                                    13 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 67
                                                                                                                                                                                                                                                                                                                                                                                                                                 / Match 6.6%; Score 136; DB 9; Length 708; Local Similarity 23.8%; Pred. No. 0.026;
                                                                                                                                                                                                                                                                                                                                                     3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                   55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                        40; Mismatches 106; Indels 30;
```

10;

Search completed: April 29, 2003, 20:16:58 Job time : 28.8683 secs

Scoring table:

BLOSUM62

Searched:

Title: Perfect score:

Sequence:

1. Appli 1. Appli 1. Appli 5. Appli 5. Appli 2. Appli 2. Appli 2. Appli 2. Appli 3. Appli 4. Appli 5. Appli 5.

6, Appli 6, Appli 20, Appl 17, Appl 16, Appl

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  April 28, 2003, 18:14:43 ; Search time 13.9029 Seconds (without alignments) 808.430 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MGLVIFLHGSGSGNEVIEGP......HPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-729-264-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.4\_p5\_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length DB
                                                                                                                                                                                                                                                                             869
332
340
441
534
534
                              US-08-977-767-3
US-09-041-886-25
PCT-US94-05277-2
US-08-374-834-16
US-08-644-271-29
US-09-651-200-2
US-09-651-200-2
US-09-651-200-2
US-09-651-200-2
US-09-651-200-2
US-09-651-200-20
US-09-651-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H
PCT-US95-08493-13
US-08-597-495B-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                  Sequence 15,
Sequence 19,
Sequence 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                        Sequence
Sequence
                                                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                           Sequence
                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                     Sequence
                                                                                                                                                                             Sequence
          Sequence
                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                  16, Appl
29, Appl
33, Appl
                                                                                                                                                         20, Appl
15, Appl
1, Appli
1, Appli
1, Appli
1, Appli
1, Appli
                                                                                                                                                                                                                                                                                                                            1, Appli
2, Appli
4, Appli
6, Appli
                                                                                                                                                                                                                                                                     4, Appli
2, Appli
                                                                                                                                                                                                                                                                                                            24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Appli
                                            Appl
Appli
Appli
Appli
Appli
                                                                                                                                                                                                                                                                                                              App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-977-767-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08977767; Patent No. 5972684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
                                                        ; CLONE: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28
29
31
32
33
34
35
36
37
38
39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Bandman, Olga
APPLICANT: Yue, Henry
APPLICANT: Greenwald, Sara
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: CARBONIC ANHYDRASE VIII
NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 31.
CITY: Palo Alto
CTATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FASTSEQ for CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 1345 amino acids
                                                                                                              IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104.5
104
104
104
104
103.5
103.5
103.5
103.5
103.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: Herew
                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                        NAME: Billings, Lucy
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                          LIBRARY: GenBank CLONE: 1532042
                                                                                                                                                                                                                                                             TELEFAX: 650-845-4166
                                                                                                                                                                                                                                               TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106
106
106
105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Incyte Pharmaceuticals, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             285
1297
1381
427
421
421
444
444
890
890
890
890
911
                                                                                                                                                                                                                                                                                                                                    Lucy J. 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us/08/977,767
                              6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-482-085B-20

US-09-540-245A-17

US-09-540-245A-16

US-08-554-612C-1

US-08-659-984A-1

US-08-660-531-1

US-08-660-531-1

US-08-660-531-5

US-08-660-531-5

US-08-640-281-5

US-08-445-640-2

US-08-447-314-2

US-08-445-41-2

US-08-445-41-2

US-08-445-41-2

US-08-441-104A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-068-051A-22
US-09-336-536-67
US-09-254-465A-6
US-07-906-349A-6
                                                                                                                                                                                                                                                                                                                                  PF-0423 US
                            Score 128.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                    DB 2;
                                    Length 1345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
```

Result No.

Score 128

Match

.00 .99 .99 .88

Query

109.5 109.5 109.5 107.5

107 107 106.5 106

Qγ 망

```
; MOLECULE TYPE: protein US-09-041-886-25
                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-041-886-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 25, Application US/09041886 Patent No. 6235872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 37; Conserv
        383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----VLPS 430
                                        169 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ 2626
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                        110 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 168
                                                                          324 ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWNKNGDVVIPSDYFQIVGG 382
                                                                                                                                       279 VI------QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA 323
                                                                                                                                                                                                       220 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                       52 VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                         10 SGSGNEV------IEGPQNATVLKGSQARENCTVSQGW--KLIMWALSDM 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 43/0 LL CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       456 CGTGAAGAGGGTCCTCTATGACCCCTTCCTGCCCCCTCTGAGACTCAGCACC 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242 VGLGLAGTMLLT-PTCTLTIRCCCCRRRCCGCNCCCRC-----CFCC 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   414 GTCTCTGT------GC-CGTGGGAAGCGTCAGAGCCCCGTGGATGTGGA 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186 GTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGI----NIPGVLSSLPSLGFSLPTWGK 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                              60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92122
                                                                                                                                                                                                                                                                                                                                                                                                                       1447 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         California
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (619) 535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bredesen, Dale E.
Rabizadeh, Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                            6.2%; Score 128; DB 4; Length 1447; 24.8%; Pred. No. 0.012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Proapoptotic Peptides, Dependence Polypeptides and Methods of Use 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33.0%; F1.
                                                                                                                                                                                                                                                                               33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 0.0095;
vismatches 41; Indels 33; Gaps
                                                                                                                                                                                                                                                                            99; Indels
                                                                                                                                                                                                                                                                        50; Gaps
                                                                                                                                                                                                                                                                          10;
                                   Qy
                                                                    В
                                                                                                  δÃ
                                                                                                                                    Вb
                                                                                                                                                                  QΥ
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                               PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Оy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application PC/TUS9405277 GENERAL INFORMATION:
431 AP 432
                                                   383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS----
                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: protein
                                 229 LP 230
                                                                             169 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS 228
                                                                                                             324 ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG 382
                                                                                                                                             110 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Kagan, Sarah A.
REGISTRATION NUMBER: 32,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                             279 VI------QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA 323
                                                                                                                                                                                                                                              220 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE: 202.508.9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                            52 VVLSVRPMEPIITNDRFTSQRKDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                              10 SGSGNEV------IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Vogelstein, Bert
APPLICANT: Zabrecky, James R.
TITLE OF INVENTION: Antibodies Specific for DCC Gene Product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: 197430 BBMB UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: ZUZ....
TELEPHONE: ZUZ....
202.508.9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US94/05277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             431 AP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229 LP 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Banner, Birch, McKie & Beckett
STREET: 1001 G Street, N.W.
                                                                                                                                                                                                                                                                                                                               60;
                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1447 amino acids
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bruskin, Arthur
Jarosz, David E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Johnson, Karen
Kinzler, Kenneth W.
                                                                                                                                                                                                                                                                                                               6.2%; Score 128; DB 5; Length 1447; 24.8%; Pred. No. 0.012; Indels 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32,141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01107.42709
                                                                                                                                                                                                                                                                                                             50; Gaps
                                                                                                                                                                                                                                                                                                               10;
```

В Qy 밁 Qγ B QΥ Дb

밁

445 TACARLP-----HIDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSFSVS 489

```
US-08-374-834-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 5656473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein US-08-374-834-16
                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                           Вр
                                                                                                                                                                                                                                                             Вþ
                                                                                                                                              Ş
                                                                                                                                                                                     밁
                                                                                                                                                                                                                       Ş
                                                                   õ
                                                                                                          밁
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (914) 345-7400
TELEFAX: (914) 345-7721
INFORMATION FOR SEQ ID NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: //.
STREET: //.
CITY: Tarrytown
CITY: New York
rrange: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTOR
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 21-JUL-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 869 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                    172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                           122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----SPLRENSRIAVLE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Cobert, Robert J. REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 08/095,658 FILING DATE: 21-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                                                                                   278 --GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                                                                                                                                         184 SNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG-----INIPGVLSSLP 230
                                                                                                                                                                                                                                                             224 TEGSEVTLHCTATGIP----VPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                                                                                                                                                                                                                133 P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                            336 FLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                                                                                                                              231 SLGFSL------PTWGKVGLGLAGTMLLTPTCTLTTRCCCCCRRCCGCN---- 273
                                                                                                                                                                                                                                                                                                                                                                                                                                              15 EVIEGPONATVLKGSOARFNCTVSOGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSORY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
324 TDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASFNLA 371
                                   389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                     274 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 323
                                                                                                                                                                                                                                                                                                                                                                       74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     777 Old Saw Mill River Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Regeneron Pharmaceuticals, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.1%; Score 126.5; DB 20.9%; Pred. No. 0.0078;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/374,834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51; Mismatches 176; Indels 99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REG 190A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 869;
```

19;

```
US-08-644-271-29
                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: unknown; MOLECULE TYPE: protein US-08-644-271-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 29, Appli
patent No. 5814478
                                                                                                                                           밁
                                                                                                                                                                             δÃ
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                      Дb
                                                                      В
                                                                                                     ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS
TITLE OF INVENTION: AND LIGANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: FASCOL DATA:
SOFTWARE: FASCOL DATA:
CURRENT APPLICATION NUMBER: US/08/644,271
APPLICATION NUMBER: 10-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION TELEPHONE: 914-345-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 15-DEC-1995
ATTORNEY/AGENT INFORMATION:
NAME: Cobert, Robert J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: USSN 60/008,657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM CC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: keyencar.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 36 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 10 CLASSIFICATION:
                                                                                                                                                                                                                  172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV 223
                                                                                                                                                                                                                                                                                        122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------SPLRENSRIAVLE- 171
                                                                                                                                                                             133 P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVS1LALTPQ 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
336 FLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                231 SLGFSL------PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN----- 273
                                                                    278 --GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                       184 SNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG-----INIPGVLSSLP 230
                                                                                                                                           224 TFGSFYTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKDRVIDSRLOLFITKP- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 914-345-7721
                                                                                                                                                                                                                                                74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                         15 EVIEGPQNATVLKGSQARENCTVSQGWK-LIMWALSDMVVLSVRPMEPITINDRETSQRY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                              ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10591
                                                                                                                                                                                                                                                                                                                                                                 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08644271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            869 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Regeneron Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-DEC-1995
                                                                                                                                                                                                                                                                                                                                                               6.1%; Score 126.5; DB 2; Length 869; 20.9%; pred. No. 0.0078; ative 51; Mismatches 176; Indels 99; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            195A
```

```
US-09-062-365-1
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                               GENERAL INFORMATION:
                                                                    Sequence 1, Application US/09062365
Patent No. 6465422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens US-09-077-955-33
APPLICANT: Schmidt, Ann Marie
APPLICANT: Stern, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-077-955-33

: Sequence 33, Application US/09077955A

: Patent No. 6413740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EARLIER APPLICATION NUMBER: PCT/US96/20696
EARLIER FILING DATE: 1996-12-13
EARLIER APPLICATION NUMBER: 08/644,271
EARLIER FILING DATE: 1996-05-10
EARLIER APPLICATION NUMBER: 60/008,657
EARLIER FILING DATE: 1995-12-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Valenzuela et al., David M.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS AND LIGANDS
FILE REFERENCE: REG195-B-PCT-US
                                                                                                                                                                                      445 TACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                   324 TDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASENLA 371
                                                                                                                                                                                                                                                                         389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                                                                                                                                                                                                                                                                    274 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 323
                                                                                                                                                                                                                                                                                                                                                                 336 FLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                                                                                                                                                                                                                                                                                                                                                                                            231 SIGFSL------PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN----- 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                       278 --GLYTCIATNKHGEKFSTAKAAATISTAEWSKPOKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184 SNGTLTCVAT----WKSLKARKSATVNLTVIRCPODTGGG-----INIPGVLSSLP 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133 P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            224 TFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               172 -----SGSLRIHNYOKEDAGOYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----SPLRENSRIAVLE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 EVIEGPONATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        445 TACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324 TDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASENLA 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      274 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/077,955A FILING DATE: 1998-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               h 6.1%; Score 126.5; DB 4; Length 869; Similarity 20.9%; Pred. No. 0.0078; 86; Conservative 51; Mismatches 176; Indels 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          176; Indels 99; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19;
```

```
δõ
                                                                 밁
                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dd
...
                                                                                                                                                                                                                     ; ORGANISM: Homo sapiens US-09-651-200-2
                                                                                                                                                                                                                                                                         SOFTWARE: Pat
SEQ ID NO 2
LENGTH: 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-651-200-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-09
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-12
PRIOR APPLICATION NUMBER:
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 2000-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 νg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                           Matches
                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-062-365-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Green et al
APPLICANT: Green et al
TITLE OF INVENTION: Polynucleotides Encoding Members of the Human B
TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and
TITLE OF INVENTION: Polypeptides Encoded Thereby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/651, 200 CURRENT FILING DATE: 2000-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/062,365
CUMBER OF SEQ ID LOS: 1998-04-17
NUMBER OF SEQ ID NOS: 6
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: METHOD FOR INHIBITING TUMOR INVASION OR SPREADING IN FILE REFERENCE: 55424
63 ITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 108
                                                                           10 SGSGNEVIEGPQNATV-LKGSQARENCTVS--QGWKL----IMWALSDMVVLSVRPHEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                     48 SPTGAVEVQVPEDPVVALVGTDATLHCSFSPEPGFSLTQLNLIWQLTDTKQLV------ 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Human
                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           306 ------PTAGSVGGSGLGTLAL 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 223 PGVLSSLPSLGFSLPTWGKVGLGLAGTMLL 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              253 -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD----- 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 IP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                152 KEQTRRHPETGLETLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              103 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG-----KPLVFNEKGVSV 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 EVIEGPQNATVLKGSQARENCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDKFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71 ----ORYDOGGNET---SEMIIHNVEDSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65;
                                                                                                                                                                                                                                                                                                                 PatentIn Ver.
                                                                                                                      5.9%; Score 122.5; DB 4; Length 340; Conservative 50; Mismatches 128; Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                       2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                         1999-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                             1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/152383
                                                                                                                                                                                                                                                                                                                                                                        60/183578
                                                                                                                                                                                                                                                                                                                                                                                                            60/172909
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-651-200-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-09-651-200-4
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                           Qy
                                                                                                                                                                                                  밁
                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence 4, Application US/09651200
Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1999-09-03
PRIOR APPLICATION NUMBER: 60/172909
PRIOR FILING DATE: 1999-12-21
PRIOR APPLICATION NUMBER: 60/183578
PRIOR APPLICATION NUMBER: 2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Polynucleotides Encoding Members of the Human B TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
CURRENT FILING DATE: 000-08-30
CURRENT FILING DATE: 000-08-30
CURRENT FILING DATE: 1000-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              101 ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              160 SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP---QDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                156 AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLIGN 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109 AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   256 HGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    289 ALAFYCWRK-----IKQSCEEENAGAEDQDG-----EGEGSKTALQPLKHSDS 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     332 KEDD 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     337 SDPE 340
                                                                                                                                                                                                                                                                                                                                                                                             149 SPTGAVEVQVPEDPVVALVGTDATLHCSESPEPGESLTQLNLIWQLTDTKQLV----- 201
357 HGSVTITGOPMTFPPEAL----WVTVGLSVCLIALLV--
                                                                                              315 VTTSQMANEQGLEDVHSVLRVVLGANGTYSC-------LVRNPVLQQDA 356
                                                                                                                                                                                                                                            109 AYLTVOVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 159
                                                                                                                                                                                                                                                                                              202 ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS 256
                                                                                                                                                                                                                                                                                                                                                                                                                                            10 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                             63 ITNDRFTSQRYDQGGNF-----TSEMITHNVEPSDSGNIRCSLQNSRLHGS 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              match
5.9%; Score 122.5; DB 4; Length 441;
Local Similarity 21.2%; Pred. No. 0.007;
es 77; Conservative 50; Mismatches 128; Indels 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VTTSQMANEQGLFDVHSVLRVVLGANGTYSC------LVRNPVLQQDA 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RCCFCCRRKRGFRIQFQKKSEKEKINKETETESGNENSGYNSDEQKTTDTASLPPKSCES 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTTRCCCCRRRCCGCNCCC 276
                                               GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTITRCCCCRRRCCGCNCCC 276
                                                                                                                                                SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP---QDT 216
                                                                                                                                                                                               AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Green et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50; Mismatches 128; Indels 109; Gaps
```

```
US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Pat
SEQ ID NO 6
LENGTH: 534
                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                               QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Green et
                                                                                                                                                                                                                                                                        VΩ
                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, Application US/09651200 Patent No. 6429303
; sequence 24, Application US/09651200 ; Patent No. 6429303
                                              RESULT 11
US-09-651-200-24
                                                                                                                                       밁
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Polynucleotides Encoding Members of the Human B TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 1999-09-03
PRIOR APPLICATION NUMBER: 60/172909
PRIOR APPLICATION NUMBER: 60/172909
PRIOR FILING DATE: 1999-12-21
PRIOR FILING DATE: 1999-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/.
PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 390 ALAFVCWRK------IKQSCEEENAGAEDQDG-------BGEGSKTALQPLKHSDS 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277 RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSCES 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            433 KEDD 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242 SPTGAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLTWQLTDTKQLV------ 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       350 AAVSLQVAAPYSKPSMTLEDNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                295 ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS 349
                                                                                                                                                                                                                              483 ALAFYCWRK-----IKQSCEEENAGAEDQDG------EGEGSKTALQPLKHISDS 525
                                                                                                                                                                                                                                                                                                                   450 HGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV----
                                                                                                                                                                                                                                                                                                                                                                 217 GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC 276
                                                                                                                                                                                                                                                                                                                                                                                                               408 VTTSQMANEQGLFDVHSVLRVVLGANGTYSC------LVRNEVLOQDA 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                        160 SSYYFYDEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP---QDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--OGWKL----IMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               / Match 5.9%; Score 121.5; DB Local Similarity 21.2%; pred. No. 0.011; pes 77; Conservative 49; Mismatches 1
                                                                                                                                                                                     337 SDPE 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 ITNDRFTSQRYDQGGNF-----TSEMITHNVEPSDSGNIRCSLQNSRLHGS 108
                                                                                                                                       526 KEDD 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SDPE 340
                                                                                                                                                                                                                                                                          RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPFKSCES 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4; Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129; Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

```
US-08-633-148-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1999-09-03
PRIOR PELING DATE: 1999-12-21
PRIOR FILING DATE: 1999-12-21
PRIOR FILING DATE: 1999-12-21
PRIOR FILING DATE: 60/18
PRIOR FILING DATE: 2000-02-18
PRIOR FILING DATE: 2000-02-18
PRIOR FILING DATE: 2005-25
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 24
LENGTH: 534
                                                                                                                                                                                                                                                                          Sequence 4, Application US/08633148 Patent No. 5864018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-651-200-24
                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 5.9%;
Best Local Similarity 21.2%;
Matches 77; Conservative 4
                              APPLICANT: MORSER, MICHAEL J.
APPLICANT: NAGASHIMA, MARIKO
APPLICANT: HOLLANDER, DORIS A.
TITLE OF INVENTION: ANTIBODIES TO ADVANCED GLYCOSYLATION
TITLE OF INVENTION: END-PRODUCT RECEPTOR POLYPEPTIDES AND USES THEREFOR NUMBER OF SEQUENCES; 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Green e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Polynucleotides Encoding Members of the Human B TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62) CURRENT FILING DATE: US/09/651,200 CURRENT FILING DATE: 2000-08-30 PRIOR APPLICATION NUMBER: 06/152383 PRIOR APPLICATION NUMBER: 60/152383 PRIOR EILING DATE: 1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Unknown Organism: Sequence OTHER INFORMATION: mz5020.protein from Figure 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                         526 KEDD 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       337 SDPE 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483 ALAFYCWRK-----IKQSCEEENAGAEDQDG------EGEGSKTALQPLKHSDS 525
ADDRESSEE: TOWNSEND & ADDRESSEET: TWO EMBARCADERO CENTER, 8TH FLOOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         277 RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSCES 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          450 HGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV------ 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217 GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         408 VTTSQMANEQGLFDVHSVLRVVLGANGTYSC-----LVRNPVLQQDA 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       160 SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP----QDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350 AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              295 ---HSETEGR-DOGSAYANRTALFPDLLAQGNASLRLORVRVADEGSFTCFV-SIRDFGS 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          242 SPTGAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLV----- 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63 ITNDRFTSORYDOGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 SGSGNEVIEGPONATY-LKGSQARFNCTVS--OGWKL----IMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Green et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 121.5; DB
Pred. No. 0.011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129; Indels 109; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17;
```

```
US-08-633-148-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                     Sequence 2, Application Patent No. 5864018
GENERAL INFORMATION:
APPLICANT: MORSER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-633-148-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 318 amino acids
TYPE: amino acid
STRANDEDNESS: Single
                                                                                        APPLICANT: HOLLANDER, DOKLS A.

APPLICANT: HOLLANDER, DOKLS A.

APPLICANT: HOLLANDER, DOKLS A.

TITLE OF INVENTION: ANTIBODIES TO ADVANCED GLYCOSYLATION

TITLE OF INVENTION: END-PRODUCT RECEPTOR POLYPEPTIDES AND USES THEREFOR NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP

ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                     STATE: CALL.
STATE: U.S.A.
COUNTRY: U.S.A.
7TP: 94111
7TP: 94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: MURPHY ESQ., MATTHEW B.
REGISTRATION NUMBER: 39,787
REFERENCE/DOCKET NUMBER: 014618
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
1415) 326-2400
                                                                                                                                                                                                              APPLICANT: NAGASHIMA, MARIKO
APPLICANT: HOLLANDER, DORIS A,
TITLE OF INVENTION: ANTIBODIES TO ADVANCED GLYCOSYLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                              306 ----- 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    223 PGVLSSLPSLGFSLPTWGKVGLGLAGT 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253 -GVPLPLPESPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG----- 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 IP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             152 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           103 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG------KPLVPNEKGVSV 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71 ---- QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 EVIEGPQNATVLKGSQARENCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRETS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match Similarity 24.0%; Pred. No. 0.01; Length 318;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
FILING DATE: 16-AP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD-----
                                                                                      CALIFORNIA
                                                                                                                                                                                                                                                                                                                                               Application US/08633148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALIFORNIA
                                                                                                                                                                                                                                                                                       MORSER, MICHAEL J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U.S.A.
Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/633,148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 014618-005600US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88; Indels 83; Gaps
```

CURRENT APPLICATION DATA:

APPLICATION NUMBER:

US/08/633,148

SOFTWARE: PatentIn Release #1.0, Version #1.30

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-633-148-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     us-09-651-200-20
; ORGANISM: sus sp. US-09-651-200-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (415) 326-2422 INFORMATION FOR SEQ ID NO: 2:
                                                                  SEQ ID NO 20
LENGTH: 325
                                                                                                                                                                                                                                            APPLICANT: Green et al
TITLE OF INVENTION: Polynucleotides Encoding Members of the Human
TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and
TITLE OF INVENTION: Polypeptides Encoded Thereby
FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
PRIOR APPLICATION NUMBER: 60/152383
PRIOR FILING DATE: 1999-09-03
                                                                                                        PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-02-18
NUMBER OF SEQ ID NOS: 25
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: MURPHY ESQ., MATTHEW B.
REGISTRATION NUMBER: 39,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: peptide
                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG-----KPLVPNEKGVSV 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 IP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSESPGLPRHRALRTAPIQPRVW 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          328 ------PTAGSVGGSGLGT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   275 -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG---- 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163 YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 39,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        223 PGVLSSLPSLGFSLPTWGKVGLGLAGT 249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71 ----ORYDOGGNET---SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLIVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match 5.8%; Score 118.5; DB Local Similarity 24.0%; Pred. No. 0.011; es 64; Conservative 32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (415) 326-2400
(415) 326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-APR-1996
                                                                                                                                                                                                                             60/172909
                                                                                                                                                                                  60/183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2; Length 340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88; Indels 83; Gaps
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-540-245A-15
; Sequence 15, Application US/09540245A
; Patent No. 6270984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                       US-09-540-245A-15
                                              В
                                                                                     δõ
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 5.7%; Score 117; DB 4; Length 325; Best Local Similarity 22.9%; Pred. No. 0.014; Matches 88; Conservative 39; Mismatches 126; Indels 132; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 15
                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-1
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-0
NUMBER OF SEQ ID NOS: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Tessier-Lavigne, Marc TITLE OF INVENTION: Modulating Robo: Ligand Interactions FILE REFERENCE: B98-031-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/540,245A CURRENT FILING DATE: 2000-03-31
                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                 ORGANISM: Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 1395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113 GLVPIHQMSSDLSLLANFSQPEINLLTNHTENSVINLTC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 HERSDDAQCDVNILKTASDDNSTTD 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 GGGINIPGVLSSLPS--LGFSLP------TWGKVGLGLAGTMLLTPTCT 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152 SSTQGYPEPQ-----RMYMLLNTKNSTTEHDADMKKSQNNITELYNVSIRVSLPIPPET 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160 SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV---IRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107 GSAYL-----TVQVMGELFIPSVNLVV--AENEPCEVTCLPSHWTRLPDISWELGLLVSH 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             258 LTIRCCCCRRRCCGCNCCCRCCFCCRRKR------GFRIQFQKK-SEKEKTNKET 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         306 ETESGNENSGYN-----SDEQKTTD 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56 NLVLYELYRGQEKPHNVNSKYMGRTSFDQA---TWTLRLHNVQIKDKGSYQCFIHHKGPH 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51 MVVL--SVRPME-PIITNDRFTSQ-RYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLH 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 MVLLLSGAAS-----LK-SQAYFNETGELPCHFTNSQNLSLDELVIFWQDQD 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 LVIFLHGSGSGNEVIEGPONATVLKGSQARFN-----C--TVSQGWKL----IMWALSD 50
130 ENEP----CEVTCLPSHWTRLPDISW---ELGLLVSHSSYYFVPEPSDLQSAVSILALTP 182
                                                                                                                                 161 PKDTRVAKGETALLECGPPKGIPEPTLIWIKDGVPLDDLKAMSFGASSRV------R 211
                                              212 IVDGGN----LLISNVEPIDEGNYKCIAQNLVGTRESSYAKLIVQVKPYFNKEPKDQVML 267
                                                                                       73 YDQGGNFTSEMIIHNVEPSDSGNIRCSLQN---SRLHGSAYLTVQVMGELFIPSVNLVVA 129
                                                                                                                                                                           20 PQNATVLKGSQARFNCTVSQG--WKLIMW-----ALSDMVVLSVRPMEPIIINDRFTSQR 72
                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --NVSIVCVLQLEPSKTLLFSLPCNIDAKPPVQPPVPDHILW-----IAALLVTVVVV 256
                                                                                                                                                                                                                           65;
                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brose, Katja
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kid, Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goodman, Corey
                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-11-14
                                                                                                                                                                                                                         5.5%; Score 114; DB 4; Length 1395; 25.8%; Pred. No. 0.2; ative 29; Mismatches 102; Indels 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --CGMVSFVTLRKRKKKOPGPSNECGETIKMNRKASEQTKNRAEV 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/081,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/065,544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----- 151
                                                                                                                                                                                                                                       56; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22;
                                                                                                                                                                                                                                           15;
```

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A_Geneseq_101002:*
1: /SIDS2/gcgdata/ge
2: /SIDS2/gcgdata/ge
3: /SIDS2/gcgdata/ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-729-264-2
2059
1 MGLVIFLHGSGSGNEVIEGP......HPQASENLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 28, 2003, 16:24:31; Search time 38.0676 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
                                                                                                                                                                                                                                           /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1994.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseq/geneseq/geneseqp-emb1/AA1997.DAT:*/SIDS2/gcgdata/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/geneseq/ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2001.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2002.DAT:*
                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1998.DAT:*
                                                                                            /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
                                                                                                                                        /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
1337.141 Million cell updates/sec
```

and is derived by analysis of the total score distribution score greater than or equal is the number of results predicted by chance to have a ater than or equal to the score of the result being printed,

SUMMARIES

Ouery Match Length DB ID 2059 100.0 382 23 AAU75540 2014 97.8 386 23 AAU75542 2004 97.3 386 23 AAU75541 1514 73.5 377 23 AAU75543 1514 73.5 377 23 AAU75544 924.5 44.9 370 23 AAU75547 583.5 28.0 370 23 AAU75547 583.5 28.0 370 23 AAU75545 494.9 24.0 223 23 AAU75545
; u
; u
; u
ID AAU75540 AAU75542 AAU75541 AAU75543 ABG28169 AAU75547 AAU75547 AAU75546 AAU75546 AAU75546

444	410	39	37	ω u	34	ωų	ی ری ⊢ ن	30	29	28	27	2 12	24	23	22	2 6) <u>+</u>	18	17	16	15	14	<u>ا</u> ل	1 F	4
124 124 123.5	125.5 125.5 124	125.5	126.5	126.5	127.5	127.5	127.5	127.5	127.5	127.5	127.5	107 5	128	128	128	128	ا الر ا الر	1 3 5	136	136	136	138	147.5	147.5	7 7 7
6.00 000	6.1 6.01	6.1	5.1	6.1	n 0	6.2	5.0	0.0	, o	6.2	6.2	20.0	n 0	6.2	6.2	o. N	თ (თ (n 0		n 0	, o	6.7	7.2	7.2	7 2
1070 1070 344	1070	576	869 537	869	881	873	873	871	867	863	475	467	1053 07/T	1447	1447	1447	Φ.		n c		594				404
23 23	22 18	3 2	22	18	19	19	17	1 Q	17 17	19	17	19	2 L	2 2	20	16	22	21) (ر ۱ د) L	23	23	23	23
		AAG77858							AAW02363	AAW62569	AAR94982	AAW62575	AAU84351	AAB50695		AAR6855	ABB1158	AAY7046	AAWA10	ABB7575	ABB/0/00	ABB7575	AAM4874	AAU7754	AAE23
ansmembra Lypeptide	Amino acid sequenc Human colon carcin Prostate cancer-as		t pro	Human muscie-speci	e Nsk2 (a.		NSK2 receptor with		receptor.	Mouse receptor tyr	Alternatively spli	Alternative Yara	Protein MYLK diffe	Deleted in Colorec	Human UNC-40 prote	Human DCC protein.	Hullan percarcases:		Melanoma associate	Human gp354 (putat			Human immunoqlobul	RAGE prot	

ALIGNMENTS

RESULT 1
AAU75540
ID AAU7

AAU75540 standard; Protein; 382 AA.

23-APR-2002 AAU75540;

(first entry)

```
Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                        Human B7-like protein, B7-L_h1.
                                                           28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                            28-JUN-2001; 2001WO-US20719
                                                                                                                                                                              WO200200710-A2
Welcher AA, Sarmiento UM,
                                                                                                                                                03-JAN-2002
                             (AMGE-) AMGEN INC.
                                                                                                                                                                                                             Homo sapiens.
      Schultz HJ,
          Chute HT;
```

```
밁
                                                                       Qy
                                                                                                                       Ъ
                                                                                                                                                              γ
                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CC autoimune diseases such as systemic lups erythematosus, rheumatoid CC purpura and psoriasis, chronic inflammatory disease such as Crave's disease, chronic inflammatory disease such as Grave's disease, chronic inflammatory disease such as Crave's disease, Hashimoto's thyroiditis and diseates mellitus. They CC are also useful as immunosuppressive agents for bone marrow and organ CC useful for diagnosis and treatment of diseases involving abnormal cell CC Antagonists of B7-L polypeptides are useful for allosensitisation due to blood transfusions, and for CC shock syndrome or allosensitisation due to blood transfusions, and for CC creatment of allergy, asthma and hypersensitivity reactions, coephropathies (e.g. glomerulonephritis), skin disorders (pemphiguia), endocrinopathies (Grave's disease), various pneumopathies (cc thrombocytopenias. Guillain-Harre syndrome and mysthenia gravis. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
241 KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEK 300
                       241 KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCGCCRRKRGERIQFQKKSEKEK 300
                                                                                                                                   181 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 240
                                                                                                                                                                                 121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 180
                                                                                                                                                                                                                          121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thrombocytopenias, Guillain Barre syndrome and myasthenia gralymphoproliferative disorders such as multiple myeloma. The psequence represents the amino acid sequence of human B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transgenic mice overexpressing B7-L cancer including seminal vesicle cancer, lung, brain, breast, ovarian, pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell molecules are useful for alleviating the symptoms associated with autoimmune diseases involving chronic immune cell dysfunction or to treat diseases involving chronic immune cell dysfunction or to treat the symptoms associated with autoimmune diseases and autoimmune cell dysfunction or to treat the symptoms associated with autoimmune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, proliferative protein labour and delivery and endometriosis) and endometriosis and extracellular domains and other regulators of B7-L polypeptides are inceful for anhancing the immune regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                       61 PIITNDRETSORYDOGGNETSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                               61 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAXLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 13; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                             1 MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSOGWKLIMWALSDMVVLSVRPME 60
                                                                                                                                                                                                                                                                                                                                                                                     1 MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for diagnosing, preventing and treating reproductive, imm
proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, useful
                                                                                        TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABK13028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                382 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 2059; DB 23;
Pred. No. 5.5e-162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gravis, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present
                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
```

```
The invention relates to an isolated B7-like (B7-L) polypeptide (I).

CC useful for treating B7-like polypeptide-related disease, disorders (C) conditions including reproductive disorders (e.g. infertility, C) are conditions including reproductive disorders (e.g. infertility, C) miscarriage, preterm labour and delivery and endometricsis) and comparising comparising comparisons and other regulators of B7-L polypeptides are comparising comparison of comparison c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XX DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PR PR PR PR PA XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
AAU75542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
purpura and psoriasis, chronic inflammatory disease such as
                  autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune an proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 13; Fig 3; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; ABK13030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Welcher AA, Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; B7-like protein; B7-L; antiinfertility; gynaecological; antilumour; cytostatic; immunosuppressive; antiarthritic; antirheumat antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human B7-like protein, B7-L_h3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU75542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU75542 standard; Protein; 386 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361 ASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361 ASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ, Chute HT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antirheumatic;
```

```
δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7. L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treatment of allergy, asthma and hypersensitivity reactions, and hypersensitivity reactions, and hypersensitivity reactions, the property of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferation, including arteriosclerosis and vascular resembles.

Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for shock syndrome or allosensitisation due to blood transfusions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133 AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192
                                                                                                                                  Human; B7-like protein; B7-L; antiinfertility; gypaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumat antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; heephrotropic; antibacterial; virucide; tumour; cancer; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU75541 standard; Protein; 386 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189 TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    129 AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69 TSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13 GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human B7-like protein, B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309 SGNENSGYNSDEQKTTDTASLPPKSCESSDPEORNSSCGPPHQRADORPPRPASHPOASF 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    373 NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 68
                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TSORYDOGGNETSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TMILITPICTLTIRCCCCRRRCCGCNCCCRCCFCCRRRRGERIQFQKKSEKEKTNKETETE 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGNENSGYNSDEOKTTETASLPPKSCESSDPEORNSSCGPPHORADORPPRPASHPOASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         386 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97.8%;

    Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 2014; DB 23;
pred. No. 2.9e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                          antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

밁 Ş

Š

```
cc proliferative disorders. Antibodies, soluble proteins comprising cc extracellular domains and other regulators of B7-L polypeptides are cc useful for enhancing the immune response to tumours. (I) plays a role in cc geninal vesicle hyperplasia in transgenic mice overexpressing B7-L cc growth and maintenance of cancer cells based on the observation of cc geninal vesicle hyperplasia in transgenic mice overexpressing B7-L cc growth and maintenance of (I) are useful for the treatment of cc polypeptide. Hence modulators of (I) are useful for the treatment of cc polypeptide. Hence modulators of (I) are useful for the treatment of cc provided the cancer including seminal vesicle cancer lung, brain, breast, ovarian, cc pathway can be manipulated to regulate cytotoxic T-lymphocyte response cc pathway can be manipulated to regulate cytotoxic T-lymphocyte response cd dependent B-cell mediated diseases and autoimmune diseases. B7-L cc diseases involving chronic immune cell dysfunction or to treat cd diseases involving chronic immune cell dysfunction or to treat cd autoimmune diseases such as systemic lupus erythematosus, rheumatoid carbitists, multiple sclerosis, diabetes, immune thrombocytopenic arbitists, multiple sclerosis, diabetes, immune thrombocytopenic carbitists, multiple sclerosis, diabetes, immune thrombocytopenic carbitists, disease, Hashimoto's thyroiditis and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ are also useful for diamonsis and treatment of diseases involving abnormal cell transplantation or to prolong graft survival. B7-L molecules are also creatile for diamonsis and treatment of diseases involving abnormal cell
                                                                                                                                                         В
                                                                                                                                                                                                        Qy
                                                    밁
                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2001; 2001WO-US20719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-NOV-2000;
                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated B7-like (B7-L) polypeptide (I) are the polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and miscarriage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 13; Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                      proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for shock syndrome or allosensitisation due to blood transfusions, and for cathent of allergy, asthma and hypersensitivity reactions, treatment of e.g. glomerulonephritis), skin disorders (pemphigus and nephropathies (e.g. glomerulonephritis), skin disorders penmphiguis and cathendary and cathendary and cathendary and secondary and secondary and secondary and secondary and thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and thrombocytopenias the amino acid sequence of human B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                              Sequence
129 AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-130881/17.
                                                    73 TSORYDOGGNETSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                  69 TSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 128
                                                                                                                                                         13 GSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMMALSDMVVLSVRPMEPIITNDRF 72
                                                                                                                                                                                                              9 GSGSGNEVIEGPQNATVLKGSQARFNCTVSOGWKLIMWALSDMVVLSVRPMEPIITNDRF 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABK13029
                                                                                                                                                                                                                                                                        372;
                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-214512P.
2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                      386 AA;
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                     97.3%; Score 2004; DB 2
99.5%; Pred. No. 2e-157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schultz HJ, Chute HT;
                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                              DB 23; Length 385;
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                        Gaps
```

QΥ

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, proterm labour and delivery and endometriosis) and extracellular domains and other regulators of B7-L polypeptides are growth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transgenic mice overexpressing B7-L seminal vesicle hyperplasia in transgenic mice overexpressing B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                 Claim 13; Fig 4; 135pp; English
                                                                                                                                                                                                    prollferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                              New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                            N-PSDB; ABK13031.
                                                                                                                                                                                                                                                                                                            Welcher AA, Sarmiento UM, Schultz HJ, Chute HT:
                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                    (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antityroid; antilicer; antiallergic; antistrimatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W0200200710-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human B7-like protein, B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU75543 standard; Protein; 377 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU75543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        369 NLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                313 SGNENSGYNSDEOKTTDTASLPPKSCESSDPEORNSSCGPPHORADORPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189 TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                          2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGNENSGYNSDEOKTTDTASLPPKSCESSDPBQRNSSCGPPHQRADQRPPRPASHPQASF 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TMLLTPTCTLTIRCCCCRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TMLLTPTCTLT1RCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8888888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            are also useful as immunosuppressive agents for bone marrow and organ currently for diagnosis and treatment of diseases involving abnormal cell controlleration, including arteriosclerosis and vascular restensis.

CC shock syndrome or allosensitisation due to blood transfusions, and for currently asthma and hypersensitivity reactions, and for currently of allevyl, asthma and hypersensitivity reactions, and for currently of allowed the second c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                     Human; chromosome mapping; gene mapping; gene therapy; forensic;
food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                           Novel human diagnostic protein #28160.
                                                                                                                                                                                                                        18-FEB-2002
                                                                                                                                                                                                                                                                                                                  ABG28169 standard; Protein; 463 AA.
                                                                                                                                                                                                                                                                                ABG28169;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                310 T---PATIQMNKRPQTPLLSLP 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        309 SGNENSGYNSDEQKTTDTASLP 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249 TMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCCCCRCCRCRRRFQFRIQFQKKSEKEKTNKETETE 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193 TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69 TSQRYDQGGNETSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73 TSÓRYDÓGGNLTSEMITHNVEPSDSGNIRCSLÓNSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 GSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TMILITERCTITIRCCCCRRRCCGCNCCCRCCECCRRRRG---NLKKRRQTKKLRQKVEMK 309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   284; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      377 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             73.5%; Score 1514; DB 23; 88.2%; Pred. No. 6.5e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
```

```
The invention relates to isolated polynucleotide (I) and CC polymeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC construction of the production of the production of the pressed sequence tags are considered as a loss used in diagnostics as expressed sequence tags are considered activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or CC (II). (II) is useful for tissue, as molecular weight markers and as quantitating a polypeptide in tissue, as molecular weight markers and as considered to the production of the production of the production of the polypeptide and polynucleotide sequences have applications in the colypeptide and polynucleotide sequences have applications of the productions of the productions of the production of mutations are considered to the product of materials to assess biodiversity and considered the product of mutations and the product of the productions of the production of the productions of the production of the pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                 밁
                                                                                                                                              Š
                                            Š
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200175067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 20; SEQ ID No 58528; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO specification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                       105 LHGSAYLTVOYMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYF 164
                                                                                                                                                                                                                                                   165 VPEPSDLOSAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPODTGGGINIPG 224
                                                                                                                                              225 VLSSLPSLGFSLPTWGKVGLGLAGTMILTPTCTLTIRCCCCRRRCCGCNCCGRCCFCCRR 284
                                                                                                                                                                                                   121 VPEPSDLQSAVSILALTPQSNCTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            45 MWALSDMYVLSVRPMEPIITNDRETSQRYDQGGNETSEMIIHNVEPSDSGNIRCSLQNSR 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                       181
                                                  285 KRG 287
241 KRG 243
                                                                                                                                                                                                                                                                                                                                                                                                            1 MWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRGSLQNSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-639362/73
                                                                                                                                                                                                                                                                                                        LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYF 120
                                                                                                 VLSSLPSLGESLPTWGKVGLGLAGTMLLTPTCTLTTRCCCCRRRCCGCCCCCCCCCCCCRC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS92356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000US-0540217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              463 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1326; DB 23
pred No. 3e-101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
AAU75544
            dependent B-cell mediated diseases and autoimmune diseases. B7-L cl dependent B-cell mediated diseases and autoimmune diseases. B7-L cd diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus crythematosus, rheumatoid carthritis, multiple sclerosis, diabetes, immune thrombocytopenic crythematory bowel disease (Crohn's disease and ulcerative colitis), crythematory bowel disease (Crohn's disease and ulcerative colitis), crythematory states, they created a systemic for bone marrow and organ crythematory disease, Hashimoto's thyroiditis and diabetes mellitus. They created a systemic state of the systemic crythematory disease and organ crythematory disease, Hashimoto's thyroiditis and diabetes mellitus. They created a systemic crythematory disease and organ crythematory disease, Hashimoto's thyroiditis and diabetes mellitus. They created a systemic crythematory disease involving abnormal cell crythematory diseases, and creatment of diseases involving abnormal cell cuseful for disgnosis and treatment of diseases involving abnormal cell crythematory diseases and vascular restenosis.

CC proliferation, including arteriosclerosis and vascular restenosis.

CC proliferation or to prolong arteriosclerosis and vascular restenosis.

CC proliferation or to prolong arteriosclerosis and vascular restenosis.

CC proliferation, including arteriosclerosis and vascular restenosis.

CC proliferation and college are useful for alleviation of toxic crythematory diseases and properties are useful for alleviation, and for creatment of allergy, asthma and hypersensitivity reactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU75544 standard; Protein; 370 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouse; B7-like protein; B7-L; antlinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirrheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antiinflammatory; anticological; antipsoriatic; antiallergic; antidiabetic; haemostatic; antithyroid; antiplicer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU75544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse B7-like protein, B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) a useful for treating B7-like polypeptide-related disease, disorders or useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, and miscarriage, preferm labour and delivery and endometricsis) and miscarriage, preferm labour and delivery and endometricsis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a roluseful for enhancing the immune response to tumours. (I) plays a roluseful for enhancing the immune response to tumours. (I) plays a roluseful for enhancing the immune response to tumours.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 13; Fig 5; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ABK13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. 87-L polypeptide testicular cancer and cancers of haematopoietic frightnesses, because pathway can be manipulated to regulate cytotoxic T-lymphocyte response pathway can be manipulated to regulate cytotoxic T-lymphocyte response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                    in allograft transplantation, graft versus host disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     preventing and treating reproductive, immune and isorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schultz HJ, Chute HT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            plays a role in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        are
```

Welcher AA,

```
Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SSSSSSSS
                                   28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                                                                                                               Rat; B7-like protein; B7-L; antiinfertility; gynaecological; antiinflammatory cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; hemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
       (AMGE-) AMGEN INC.
                                                                                     28-JUN-2001; 2001WO-US20719
                                                                                                                             03-JAN-2002.
                                                                                                                                                                                           Ratus rattus.
                                                                                                                                                                                                                                                                                                                                                                    Rat B7-like protein, B7-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU75547 standard; Protein; 631 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343 KHQPGPATHPRVSFDIASPQKVRNVTLV 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              355 QRPPRPASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   285 NMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  298 KEKTUK---ETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRAD 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240 IILLAVAFSLLLILIIVLIIIFCCC-------CASRREKEESTYONEIRKSA 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 KVGLGLAGTMLLTPTCTLTIRCCCCCRRCCGCNCCCRCCFCCRKKRGFRIQFQ----KKSE 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      192 TPLGNGTLTCVAELKDLQASKSLTVNLTVVQPPPD-----SIGEEGPALPTWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSLPTWG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLOSAVSILAL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72 PIITNNRPTYASYNSTDSFISELITHDVQPSDSGSVQCSLQNSHGFGSAFLSVQVMGTLN 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAXLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 LVIF--LHGSGSGNEVIEGPONATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPŚNNLIVTEGEPCNVTCYAVGWTSLPDISWELEVPVŚHŚSYNSFLEPGNFWRVLSVLDL 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          370 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44.9%; Score 924.5; DB: 50.8%; Pred. No. 3.6e-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 104; Indels 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 23; Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
```

밁 Qγ Дb 20 ДЪ Qy В

132 LSCDYKFCSEEQSIHRIYWQKHDKMYLSVISGYPEVWPKYKNRTTYASYNSTDSFISELI 191

TSQRYDQGGNFTSEMI 84

IHNVEPSDSGNIRCSLQNSRLHGSAYL----

72 VGQVSKSVRNVTVLKDSEAHENCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFEKAL 131

12 LVILAQLTASGSSYQTIEGPQMAYSCQPLQESPLLGFPRLRFTHLFVLLLVGLLQISSGI

Indels 317; Gaps

11;

3 LVIF--LHGSGSGNEVIEGPQ------

22 -----NATVLKGSQARENCTYSQGWKLIMWALSDMYVLSVRPMEPIITNDRE----

252 EGGSYVVKHLTTVEVNGTLNIPSNNLIVTEGEPCNVTCYAVGWTSLPDISWELEVPVSHS 112 -----TVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHS 192 IHDVQPSDSGSVQCSLQNSHGFGSÅFLSVQVYDIANNYSFSLLGLILSDRGTYTCVVQRY 251 Matches 173; Query Match

Local

Similarity

28.3%; Score 583.5; DB 23; Length 631; 26.9%; Pred. No. 1.2e-39; 43; Mismatches 111;

Conservative

```
CC The polypeptide, polynucleotide encoding it and antibody against (I). CC useful for treating B7-like polypeptide-related disease, disorders (I) are conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricsis) and complete the disorders or cc miscarriage, preterm labour and delivery and endometricsis) and cc extracellular domains and other regulators of B7-L polypeptides are cc growth and maintenance of cancer cells based on the observation of cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L cc cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cc pathway can be manipulated to regulate cytotoxic T-lymphocyte response cc dependent B-cell mediated diseases and antonomnian disease, T-cell
          useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic treatment of allergy, asthma and hypersensitivity reactions, and for nephropathies (e.g. glomerulonephritis), skin disorders (pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrainsic alveolitis), vasculopathies, coeliac disease, anaemia, lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of rat B7-1.
  Sequence
                                                                                                                                                                                                                                                                                                                  autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                       are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also
                                                                                                                                                                                                                                                                                                                                                                                                                                         dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 8; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-130881/17.
631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sarmiento UM, Schultz HJ, Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      useful
```

20 밁

Š

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU75545 standard; Protein; 270 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          372 RVLSVLDLTPLGNGTLTCVAELKDLQASKSLTVNLGINTTISQDPESELYTISSQLDFNA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312 LSVRADFPTPNITEYGNPSADIKRITCFASGGFPKPRLSWLENGRELNSYNSFLEPGNFM 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mouse B7-like protein, B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2002 (first entry)
The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders of conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                 28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                        03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                               Welcher AA,
                                                                                                                                                                                                                                                                                                               (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W0200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                               Claim 13; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYDHFIDCFIEYGDAHVSQNFTVVQPPPD-----SIGEEGPALPTWAIILLAV 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAVSILALTPQSNGTLTCVATWKSLKARKSATVNL-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENYGYSSDECITVKFRRCFRRRNEASRETNKNLYIGPVEAAAEQ 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQ 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ-KKSEKEKINK---ETETESGN 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AFSLLLILIIVLIIIFTWVKPPEDPPDEKQTVPFAWAGPDAVKAIIIFFIAITVIAVIAA 539
                                                                                                                                                                                                                                            2002-130881/17
                                                                                                                                                                                                                        ABK13033
                                                                                                                                                                                                                                                                             Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                      2000US-214512P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----TVIRCPODIGGGINIPGVLSSLPSLGFSLPIWGKVGLGL 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----SYYFVPEPSDLQ 172
                                                                                                                                                                                                                                                                                Schultz HJ,
                                                                                                                                                                                                                                                                                  Chute HT;
                                                                                                                                                                                               useful
                                                                        are
```

AAU75546 RESULT 9

AAU75546 standard; Protein; 223 AA.

XXX

AAU75546;

```
8888888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                craves outsease, nastranton of trivious and construction of the also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis.

C proliferation, including arteriosclerosis and vascular restenosis.

C proliferation of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions.

C treatment of allergy, asthma and hypersensitivity reactions, and for penphapathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anemia, centrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and combocytopenias, Guillain-Barre syndrome of mouse B7-L_m2.
                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вр
                                                                                                                               В
                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoletic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease. B7-L dependent B-cell mediated diseases and autoimmune diseases. B7-L dependent B-cell mediated diseases and autoimmune of the symptoms associated with molecules are useful for alleviating the symptoms associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohh's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seminal vesicle hyperplasia in transgenic mice overexpressing B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 180
                                                          355 QRPPRPASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                         241 KYGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQPQ---KKSE 297
243 KHQPGPATHPRVSFDIASPQKVRNVTLV 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12 LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 LVIF--LHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN 242
                                                                                                                                                                                         KEKTNK---ETETESGNENSGYNSDEOKTTDTASLPPKSCESSDPEORNSSCGPPHQRAD 354
                                                                                                                                                                                                                                                              IILLAVAFSLLLILIIVLIIIFCCC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        136;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 575.5;
Pred. No. 1.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1.8e-39
                                                                                                                                                                                                                                                                         -----CASRREKEESTYQNEIRKSA 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 23; Length 270,
                                                                                                                                                                                                                                                                                                                                                                                                        ---DSIGEEGPALPTWA 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 137; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71
```

6

```
proliferation, including arteriosolerosis and vascular restenosis.
Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, and for nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and (extrinsic alveolitis), vasculopathies (crave's disease, various pneumopathies thrombocytopenias, Guillain-Barre syndrome and mysathenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m3.
                                                                                                                                                                                                                                                                                                         in allograft transplantation, graft versus host disease, Tcell redependent B-cell mediated diseases and autoimmune diseases. B7-L dependent B-cell mediated diseases and autoimmune diseases. B7-L diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seminal vestcle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vestcle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response
                                                                                                                                                                                                                                          are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including afteriosciences and containing abnormal cell proliferation, including afteriosciences and containing abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                useful for enhancing the immune response to tumours. (I) plays a growth and maintenance of cancer cells based on the observation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 13; Fig 7; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune an proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mouse: B7-like protein; B7-L; antiinfertility; gynaecological; antilumour; cytostatic; immunosuppressive; antilarthritic; antirheumat antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse B7-like protein, B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schultz HJ, Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     userul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 are
```

```
.; Db
PT PT PT CCC
                                                                                                                                  PA
XX
PI
XX
DR
                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                          Material for extracorporeal circulation, applicable in selective elimination of diabetic complication factors such as carbonyl stress products caused by abnormally promoted carbonyl stress from excretory
                     Claim 1; Page 31-32; 36pp; Japanese.
                                                     dysfunction in vascular lesions
                                                                                                                               WPI; 2001-290314/30.
                                                                                                                                                                                         (TORA ) TORAY IND INC
                                                                                                                                                                                                                     08-SEP-1999;
                                                                                                                                                                                                                                                08-SEP-2000; 2000WO-JP06172.
                                                                                                                                                                                                                                                                                                                                         Unidentified
                                                                                                                                                                                                                                                                               15-MAR-2001.
                                                                                                                                                                                                                                                                                                            WO200118060-A1
                                                                                                                                                                                                                                                                                                                                                                   diabetes; vascular
                                                                                                                                                                                                                                                                                                                                                                          Extracorporeal circulation; carbonyl stress product; receptor;
                                                                                                                                                                                                                                                                                                                                                                                                       Extracorporeal circulation material receptor protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB81925 standard; protein; 404 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB81925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        199 PGPATHPRVSFDIASPQKVRNVTLV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           141 THKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELNKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301 TNK---ETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   358 PRPASHPQASFNLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241 KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEK 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134 ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 LVIF--LHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIITNNRFTYASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ-----
                                                                                                                                                           Kubota M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     223 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                     99JP-0254463
                                                                                                                                                                                                                                                                                                                                                              lesion; excretory dysfunction
                                                                                                                                                         Akiyama H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24.0%; Score 494; DB 23; 31.9%; Pred. No. 7.7e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -- RKSANM-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37; Mismatches
                                                                                                                                                      Usui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----ESTY--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47; Indels 178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----QNEI----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7;
```

The present invention describes a material for extracorporeal circulation

```
8888888x&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE23219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       which is made from a water-insoluble carrier immobilized with a protein having the sequence shown here. The materials of the invention, including adsorbents, are for extracorporeal circulation, which are applicable in the selective elimination of diabetic complication factors from a body fluid, and are therefore useful in treating vascular lesions like arteriosclerosis due to carbonyl stress products caused by abnormally promoted carbonyl stress from excretory dysfunction.
                                                                                                                                                                                                                                                                                             Human; Receptor for advanced glycosylation end product; RAGE; cardiant; tissue growth; neointimal formation; blood vessel; restenosis; diabetes; myocardial infarction; angioplasty; peripheral vascular surgery; angina; transgenic animal; acute thrombotic stroke; venous thrombosis.
                                                                                                                                                                                                                                                                                                                                                                                       Human receptor for advanced glycosylation end product (RAGE) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                27-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE23219 standard; Protein; 404 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 IP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   174 KEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG-----KPLVPNEKGVSV 173
 WPI; 2002-426260/45
                                                                                                                                                 12-OCT-2001; 2001WO-US32036
                                                                                                                                                                                                                         WO200230889-A2
                                      Stern DM,
                                                                                                            13-OCT-2000; 2000US-0687528.
                                                                                                                                                                                      18-APR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            276 CRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  223 PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRRCCGCNCC 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       275 -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG-----
                                                                         (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71 ---- QRYDQGGNFT--SEMIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS----PQIHWMKD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.2%;
Similarity 22.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404 AA;
                                        Schmidt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----QRRGEERKAPENQEEEEERAELN------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR----- 366
                                          Marso S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40; Mismatches 114; Indels 137; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 147.5; DB 2
Pred. No. 0.00076;
                                        Topol E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 22;
                                            Lincoff AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 УŽ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                               XEXEXXXX
                                                                                                                                                                                                                                                   RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              blood vessel injury and preventing exaggerated restenosis in a diabetic subject. The method comprises administering an inhibitor of receptor for advanced glycation/glycosylation end product (RAGE), so as to inhibit new tissue growth or neointimal formation in subject's blood vessels and preventing restenosis in the subject. The method is useful for inhibiting new tissue growth or neointimal formation in blood vessels in a subject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inhibiting new tissue growth or neointimal formation in blood vessels of subject suffering from diabetes, stroke and preventing restenosis, comprises administering inhibitor of receptor for advance glycation end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAD36952.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         like non-human animal, a transgenic non-human animal or a human suffering from diabetes, acute thrombotic stroke, venous thrombosis, unstable angina, myocardial infarction, abrupt closure following anciopiasty or stent placement, or thrombosis as a result of peripheral vascular surgery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method for inhibiting new tissue growth or neointimal formation in blood vessels in a subject that has experienced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 16; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The method is also useful for preventing restenosis and for determining whether a compound inhibits new tissue growth in a blood vessel in a subject. The present sequence is human receptor for advanced glycosylation end product (RAGE) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Receptor for advanced glycation end product; RAGE; receptor: amyloid beta peptide; blood-brain barrier; neurovascular str
                                                               Human receptor for advanced glycosylation end product (RAGE).
                                                                                                                                                                                                      AAU77543 standard; Protein; 404 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG-----KPLVPNEKGVSV 173
                                                                                                               05-JUN-2002
                                                                                                                                                           AAU77543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        174 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163 YFYPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                             334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71 ---- ORYDOGGNET---SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 22.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IP----SVNLVVAENEP--------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS----PQIHWMKD-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GVPLPLPSSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRRCCGCNCC 275
                                                                                                                                                                                                                                                                                                                     -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             ---QRRGEERKAPENQEEEEERAELN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 147.5; DB 2
Pred. No. 0.00076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 23; Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114; Indels 137; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention describes a method of ameliorating neurovascular stress, and decreasing cerebral vasoconstriction in subject suffering from the control or acute cerebral amyloid angiopathy, comprising administering an inhibitor (I) of receptor for advanced glycation end product (RAGE). CC an inhibits transcytosis of amyloid beta peptides across blood-brain cc barrier, thus decreasing cerebral vasoconstriction and increasing cerebral blood flow. (I) is useful for treating amyloid angiopathy in a csubject, decreasing cerebral vasoconstriction in a transgenic non-human cc beta precursor protein) or a human, suffering from chronic or acute cerebral amyloid angiopathy, preferably, transgenic mouse overexpressing mutant human amyloid cerebral amyloid angiopathy, preferably, Alzheimer's disease, and for cameliorating neurovascular stress comprising cerebral amyloid angiopathy (considered by Alzheimer's comprising cerebral amyloid angiopathy preferably, branchising cerebral amyloid angiopathy (considered by Alzheimer's comprising cerebral amyloid angiopathy preferably, branchising cerebral amyloid angiopathy preferably, branchising cerebral amyloid angiopathy (considered by Alzheimer's comprising cerebral amyloid angiopathy preferably) and the neurovascular stress is caused by Alzheimer's comprising cerebral amyloid angiopathy considered profession and for considered profession and c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
276 CRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS 333
                                                                                                                 223 PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCCRRRCCGCNCC 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    product (RAGE) described in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ameliorating neurovascular stress and decreasing cerebral vasoconstriction in subject suffering from chronic/acute cerebral amyloid angiopathy, by administering inhibitor of receptor for ad
                                                                                                                                                                                                                                                                                                231 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD-----
                                                                                                                                                                                                                                                                                                                                                                                                               174 KEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 16; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125 EIVDSASELTA--GVPNKVGTCVSEGSYPAGTLSWHLDG------KPLVPNEKGVSV 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; ABK10856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stern DM, Schmidt AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-AUG-2000; 2000US-0638648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-AUG-2001; 2001WO-US25416.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alzheimer's disease; Down's syndrome; head trauma; stroke; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cerebral vasoconstriction suppressor; cerebral blood flow enhancer; cerebral amyloid angiopathy; transgenic animal; amyloid beta precursor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200214519-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71 ---- QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEPIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                               -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG-----
                                                                                                                                                                                                                                   YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                    IP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002-257610/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                             -PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7.2%;
22.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yan SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 147.5; DB 2
Pred. No. 0.00076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zlokovic B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 23; Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 137;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for advanced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                              Qγ
```

ğ 밁 Š 밁 Š Дb Š

```
. . . Db
                                                            밁
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                             Matches
                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                              or inflammatory lupus nephritis, erectile dysfunction and
                                                                                                                                                                                                                                                                                                            useful for rapid, high-throughput identification of compounds that modulate RAGE. The compounds are useful for treating symptoms of diabetes and symptoms of diabetic late complications, amyloidoses, Alzheimer's disease, cancer, inflammation, kidney failure, systemic lupus nephritis
                                                                                                                                                                                                                                                                                                                                                                           The invention relates to detecting receptor for advanced glycated endproducts (RAGE) modulators comprises determining the amount of RAGE protein or its fragment bound to the pre-adsorbed ligand by measuring the amount of anti-RAGE antibody bound to the solid surface. The method is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Detecting a receptor for advanced glycated endproducts (RAGE) modulators, for treating e.g., cancer, diabetes or inflammation, comprises measuring the amount of bound anti-RAGE antibody -
                   121 IP----SVNLVVAENEP-----
                                              174 KEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRALRTAPIQPRVW
                                                                                                                           125
                                                                                                                                                                                                                                                                                       atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Fig 2; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-114372/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2000;
05-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; RAGE; receptor for advanced glycated endproduct; receptor; antidiabetic; neuroprotective; cytostatic; antiinflammatory; vaso nephrotropic; dermatological; antiarteriosclerotic; nootropic; disease; cancer; inflammation; kidney failure; systemic lupus; nephritis; erectile dysfunction; atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-MAY-2001; 2001WO-US17447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TRAN-) TRANS TECH PHARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W0200192892-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                              15 EVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEDIITNDRFTS- 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human RAGE protein SEQ ID NO 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM48745 standard; protein; 404 AA.
                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            390 -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                367
                                                                              ----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAYLTVQVMGELF 120
                                                                                                               EIVDSASELTA--GVPNKYGTCVSEGSYPAGTLSWHLDG------KPLVPNEKGVSV 173
                                                                                                                                                                                          85;
                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                          404 AA;
                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-207342P
2001US-0799152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                      7.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       --QRRGEERKAPENQEEEEERAELN-----
                                                                                                                                                                                      40;
-----CEVTCLPSHWTRLPDISWELGLLVSHSSY 162
                                                                                                                                                                                               Score 147.5; DB 23; Length 404; Pred. No. 0.00076;
                                                                                                                                                                                    Mismatches
                                                                                                                                                                                    114;
                                                                                                                                                                               Indels 137; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nootropic; diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vasotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389
                                                                                                                                                                               18;
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABB75751
ID ABB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
Human; GP354; immunoglobulin; pancreas; central nervous system; diagnosis; gene therapy; pancreatitis; inflammation; tumour; cancer; autoimmune disease; Alzheimer's disease; Parkinson's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           senile dementia; migraine; epilepsy; neurasthenia; neuropathy; neural degeneration; antiinflammatory; cytostatic; nootropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human immunoglobulin superfamily member GP354.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABB75751 standard; Protein; 592 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163 YEVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINI 222
                                                                                                                                                                                                                                                                                                                                                                                                                                     anticonvulsant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-JUN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              223 PGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCCRRRCCGCNCC 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  231 EPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWMKD------ 274
                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                                                                                                                              immunosuppressive; antiparkinsonian; neuroprotective; antimigraine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             390 -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    334 CESSDPEQRNSSCGPP 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               276 CRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKTTDTASLPPKS 333
                                                                                                                               WO200198360-A2.
                                                                                                                                                                 Domain
                                                                                                                                                                                                             Domain
                                                                                                                                                                                                                                    Domain
                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                                                 Domain
                                                                                                                                                                                                                                                                                                       Domain
                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                                                                                                                                                                                                                                                      Protein
                                                                                                                                                                                                                                                                                                                                                                            Peptide
(LUKA/) LUKASHIN A V. (KILB/) KILBURN D R.
           (BIOJ ) BIOGEN INC.
(CARU/) CARULLI J P.
(LUKA/) LUKASHIN A V
                                                                               22-JUN-2001; 2001WO-US19904.
                                                          22-JUN-2000; 2000US-213611P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-PGEEG----- 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILWQRR-----
                                                                                                                                                                                                                                                                                                         /note= "extracellular domain"
35..102
                                                                                                                                                                                                                                                                                                                               /label- Mature_protein 19..507
                                                                                                                                                                                                                                                                                                                                                      /label= Signal_peptide 19..592
                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                        323..374
                                                                                                                                                                                                                                                                                             /note-
                                                                                                                                                                                                                           /note-
                                                                                                                                                     /note=
                                                                                                                                                                             /note=
                                                                                                                                                                                                     note-
                                                                                                                                                                                                                                                                        note:
                                                                                                                                                                                                                . 485
                                                                                                                                                                    . 592
                                                                                                                                                                                                                                                                                   . 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -QRRGEERKAPENQEEEEERAELN---------
                                                                                                                                                       "intracellular domain"
                                                                                                                                                                                                                                                                                             "Ig domain"
                                                                                                                                                                              "transmembrane domain"
                                                                                                                                                                                                   "Ig domain"
                                                                                                                                                                                                                         "Ig domain"
                                                                                                                                                                                                                                                                      "Ig domain"
                                                                                                                                                                                                                                                "Ig domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 366
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QУ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
    W W W W D X D T
                                                                                                                                                                                                                                                                               ABB75753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid or GP354 polypeptide are used in the treatment of pancreatic injury and abnormal or disease conditions that relate to the pancreas, such as acute or chronic pancreatitis, pancreatic informal pancreatic endocrine and hormonal imbalance, pancreatic tumours and pancreatic endocrine and hormonal imbalance, pancreatic tumours and eassociated cancers, and autoimmune disorders which affect the associated cancers, and autoimmune disorders which affect the pancreas. They are also used in the treatment of an injury to the CNS, and abnormal or disease conditions that relate to the CNS, including Alzheimer's disease, Parkinson's disease, senile dementia, migraine, epilepsy, neuritis, neurasthenia, neuropathy, neural degeneration and neural tumours (all claimed).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          at low levels in central nervous system (CNS) tissue. It shares not not than 30% amino acid identity with any previously described protein. The protein structure and tissue distribution of GP354 indicate a role in cell-cell recognition, binding, signalling and adhesion events in the pancreas and CNS. The present invention provides GP354 polypeptides and gP354 polynucleotides, as well as vectors, host cells, antibodies and related diagnostic and therapeutic methods. Claimed compositions comprising a gP354 therapeutic methods. Claimed compositions comprising a gP354 therapeutic methods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel nucleic acid sequence encoding a member of immunoglobulin superfamily, designated GP354, useful for the treatment of Alzheimer's disease, Parkinson's disease, senile dementia, migraine and epilepsy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carulli JP, Lukashin AV, Kilburn DR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; ABL53873, ABL53875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-329171/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SUNC/) SUN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   novel member of the immunoglobulin superfamily. GP354 is a novel member of the immunoglobulin superfamily, which is also detected pancreas-enriched integral membrane protein, which is also detected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is the protein sequence of human GP354, a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 17; Fig 1; 163pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Human; GP354; immunoglobulin; pancreas; central nervous system; diagnosis; gene therapy; pancreatitis; inflammation; tumour; cancer; autoimmune disease; Alzheimer's disease; Parkinson's disease; senile dementia; migraine; epilepsy; neurasthenia; neuropathy;
                                                                                                                                                                                                              ABB75753;
                                                                                                                                                                                                                                                          ABB75753 standard; Protein; 594 AA
                                                                                                                  Human pancreas GP354.
                                                                                                                                                                  24-JUN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                            177
                                                                                                                                                                                                                                                                                                                                                                                                                   168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 APQVLGG---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGTTFHQTLLKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          114 -- QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 LFCFRGSAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                       GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      592 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.7%;
23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 138; DB 20
Pred. No. 0.0075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sun C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                It shares no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
```

```
Query Match
Best Local :
                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                          and 99354 polynucleotides, as well as vectors, host cells, antibodies and related diagnostic and therapeutic methods. Claimed compositions comprising a 99354 nucleic acid or 69354 polypeptide are used in the treatment of pancreatic injury and abnormal or chronic pancreatitis, pancreatic to the pancreas, such as acute or exocrine insufficiency, pancreatic inflammation, pancreatic necrosis, pancreatic tumours and associated cancers, and autoimmune disorders which affect the pancreas. They are also used in the treatment of the CNS, including alzheimer's disease conditions that relate to the CNS, including alzheimer's disease, Parkinson's disease,
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is the protein sequence of human panéreatic GP354, a novel member of the immunoglobulin superfamily. GP354 is a pancreas-enriched integral membrane protein, which is also detected at low levels in central nervous system (CNS) tissue. The protein structure and tissue distribution indicate a role for GP354 in cell-cell recognition, binding, signalling and adhesion events in the pancreas and CNS. The invention provides GP354 polypeptides and contained a role of GP354 in the pancreas and CNS. The invention provides GP354 polypeptides
                                                                                                                                                                                                                                                                                                           senile dementia, migraine, epilepsy, neuritis, neurasthenia, neuropathy, neural degeneration and neural tumours (all claimed).
114 --QVMGELFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel nucleic acid sequence encoding a member of immunoglobulin superfamily, designated GP354, useful for the treatment of Alzheimer's disease, Parkinson's disease, senile dementia, migraine and epilepsy -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 17; Fig 8; 163pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-329171/36.
N-PSDB; ABL53877.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carulli JP, Lukashin AV, Kilburn DR, Sun C;
                                      65 ---DLPGWSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPE 121
                                                                         63 ITNDRFTSQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV----- 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-JUN-2001; 2001WO-US19904
                                                                                                                10 LFCFRGRAGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----- 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SUNC/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (CARU/) CARULLI J P.
(LUKA/) LUKASHIN A V.
(KILB/) KILBURN D R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BIOJ ) BIOGEN INC. (CARU/) CARULLI J E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-JUN-2000; 2000US-213611P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200198360-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neural degeneration; antiinflammatory; cytostatic; nootropic;
                                                                                                                                                  3 LVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPI 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anticonvulsant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunosuppressive; antiparkinsonian; neuroprotective; antimigraine;
                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUN C
                                                                                                                                                                                                                                                                                     594 AA;
                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /label= Signal_peptide
19..594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                    6.6%; Score 136; DB 2
23.8%; Pred. No. 0.011;
                                                                                                                                                                                                     40;
                                                                                                                                                                                               Mismatches 106;
                                                                                                                                                                                                                                  DB 23; Length 594;
                                                                                                                                                                                           Indels 30; Gaps
                                                                                                                                                                                           10;
```

Ş 밁 Qy 밁 ΩV

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
177 GTPGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 168 --PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||:| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||:|: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||: ||:
```

Search completed: April 28, 2003, 18:14:28 Job time: 43.0676 secs

```
Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
                                                                                                                                                                                                                            Result
                                                                                                                                                                                                                                                                           pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
136.5
135.5
134.5
133.5
132.5
129.5
129.7
125.5
125.5
125.5
                                                                                                                                                                           1692
566.5
                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length: 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               April 28, 2003, 16:24:32; Search time 37.1283 Seconds (without alignments) 2142.147 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-729-264-4
2088
1 MVAGAMENRDPPGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 671580 segs, 206047115 residues
                                                                                                                                                                                                                 Match Length DB
                                                                                                                                                                                                                               Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
 81.
6.00
6.00
6.00
6.00
6.00
6.00
6.00
                                                                                                                                                                                                                                                                                                                                                                                                                              sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sp_human:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sp_archea:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sp_fungi:*
                                                                                                                                                                                                                                                                                                                                                                                                                                              sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                   sp_virus:*
sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                                                                                                                                                        sp_bacteriap:*
                                                                                                                                                                                                                                                                                                                                                       sp_rvirus:*
                                                                                                                                                                                                                                                                                                                                                                                                         sp_rodent:*
                                                                                                                                                                                                                                                                                                                                sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                  sp_plant:*
1445
1427
871
881
869
164
197
166
344
697
                                                                            Q61988
O15146
                                                                                                                                                    Q92626
                                                                                                                                                                                           Q9NSI5
                                                                                                                                                                                                                    ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         summaries
                                      Q95QY
                                                                                                  Q61987
                                                                                                                                        Q9D4K2
                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                    O98892 mus musculu
Q94912 mus musculu
Q92626 homo sapien
Q944k2 mus musculu
Q63155 rattus norv
Q91562 xenopus lae
Q61987 mus musculu
                                                                             015146
                                                                                                                                                                                             Q9nsi5 homo sapien
                                                                                                                                                                                                                       Description
                                        Q95qy1 caenorhabdi
                                                     Q17641
                Q9df61 gallus gall
Q9dbp0 mus musculu
                                                                                            Q61988 mus musculu
     Q9z290 mus musculu
                                                                 homo sapien
caenorhabdi
                                                        caenorhabdi
```

0.	-	w	١٠	_	_	•	_		•																				
114.5	114.5	114.5	115	115	115.5	115.5	115.5	115.5	115.5	115.5	116	116	116	116.5	116.5	117	\vdash	118.5	119	119.5	120	120	120	120	120	120.5	122	122.5	
5.5	ნ	ა ა	ເກ ເກ	5.5	5.5	5. 5	5.5	5 5	5. 5	5.5	5.6	ნ	5. 6	51. 6	5.6	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.8	5.8	5.9	
26926	531	152	868	344	1327	946	868	860	677	390	975	968	959	868	364	868	868	5636	. 344	6632	1395	1395	344	315	313	455	6620	188	
4	1	5	11	4	13	L W	11	11	13	4	υı	σ	S	Η	4	11	11	4	1	G	ı σ	σ	13	13	13	4	4	Ŋ	
Q10466		Ø		0					Q8QHL2	~					QBTD24	Q9R094	062838	Q96RW7	004660	001/61	Q9W213	044924	093242	Q9DGI5	057596	Q9UIRO	Q96AA2	Q18238	
× 10400	01016	Q 4 4 4 4 5 1 0 C 1 2 1 0	O TO TO	CONCRE	000101	087513	00100	061000	2411700	08251	001100	007174	00114	000000	00 com 51	08+024	097094	858690	したいてなり	1000	001761	O1::013	1000	. Cada	0040	057506 . 057506	00::570	SS 2000	
I	משומל	0	2000	2010	Sal Can		+ 1		and and	J.	7 6			drost.	Stilli L	המוכר משום ה		R rati	homo	Dana sum		drosophila	danah.	Callic	gallus	rall	homo sapien	0	

ALIGNMENTS

RESULT 1

```
A CONTROL OF THE TOTAL CONTROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9NSI5
                                                                                                                                                                                                                                                                                      RA Hattori M., Fujiyama A., Taylor T.D., Watanabe H., Yada T., Park H.S.,
RA Tayda A., Ishii K., Totoki Y., Choi D.K., Soeda E., Ohki M.,
RA Takagi T., Sakaki Y., Taudien S., Blechschmidt K., Polley A.,
RA Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D.,
RA Reichwald K., Rump A., Schillhabel M., Schudy A., Zimmermann W.,
RA Rosenthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S.,
RA Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.E.,
RA Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
RA Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P.,
RA Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E.,
RA Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F.,
RA Lehrach H., Reinhardt R., Yaspo M.L.;
DR Lehrach H., Reinhardt R., Yaspo M.L.;
DR InterPro; IPR003599; IG.
DR InterPro; IPR003599; IG.
DR InterPro; IPR003599; IG.
DR InterPro; IPR003599; IG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9NSI5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9NSI5;
                                                                                                                        Interpro; IPR003599; Ig.
Interpro; IPR003006; Ig_MHC.
Interpro; IPR003006; Ig_MHC.
Pfam; PF00047; Ig; 2.
SMART; SM00409; IG; 2.
SMART; SM00409; IG; 2.
PROSITE; PS000022; EGF_1; UNKNOWN_1.
                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IGSF5 protein (Fragment).
SEQUENCE
         315
315 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
              34599 MW; B69DCB23570FA3D1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
```

Length 315;

0;

<u>ن</u>

```
AC DRIVER RAP RAPARA RA
                                                                                                                                                                                                                                                                                  RA Kawai J. Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Alzawa K. Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Salto T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Séya T., Shibata Y., Storch K.-F.,
Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Hyasahizaki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                 EMBL; AK008060; BAB25436.1; EMBL; BC004806; AAH04806.1;
                                                           Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                   lature 409:685-690(2001).
                                                                                                                                                                                                                                 "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-C57BL/6J; TISSUE-SMALL INTESTINE; MEDLINE-21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
2010003D20R1k protein (RIKEN cDNA 2010003D20 gene).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9D8G2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9D8G2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314 GNENSGYNSDEOKTT 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134 ENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GNENSGYNSDEQKTT 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELFIPSVNLVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81.0%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1692; DB 4;
Pred. No. 3.6e-148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
```

```
ACCOMPAGNATION ACCOMP
               RA Kawal J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casawant T.,
RA Kuehi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehi P., Cakido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincloh S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Kyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.
Sasaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Wunehau-Porie a Voehida W. Lacarara V. Wanada W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DR
DR
DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
   Wynshaw-Boris A., Yoshida K., Hasegawa Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=TESTIS; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4931420D14RIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9D9I2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9D9I2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Interpro; IPR003599; Ig.
Interpro; IPR003006; Ig_MHC.
SMART; SM00409; IG, II.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               252 PRVSFDIASPQKVRNVTLV 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194 ETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELNKHQPGPATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            368 POASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  254 MILITPICILTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSEKEKTNK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 CVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        134 ENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 YASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ------- 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74 SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 SGSGNEVIEGPONARVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21 SGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFT 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASH 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLLIIVLIIIFCCC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         270 AA; 29604 MW; A39C273DAA950DFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27.1%; Score 566.5; DB ] 34.6%; Pred. No. 3.3e-44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ------DSIGEEGPALPTWAIILLAVAFS 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---CASRREKEESTYQNEIRKSANMRTNKADP 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      168 AA
   Kawaji H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels 135;
Kohtsuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
SO PRE RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
Q92626
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature 409:685-690(2001).
EMBL; AK006892; BAB24782.1;
MGD; MGT:1913992; 4931420D14R1k.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q92626 PRELIMINARY; PKT; 1490 AA.
Q92626;
Q92626;
Q1-FEB-1997 (TrEMBLrel. 02, Created)
Q1-FEB-1997 (TrEMBLrel. 02, Last sequence update)
Q1-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-97191544; PubMed=9039502;
Nagase T., Seki N., Ishikawa K., Ohira M., Kawarabayasi Y., Ohara O., Tanaka A., Kotani H., Miyajima N., Nomura N.; Tanaka A., Kotani H., Miyajima N., Nomura N.; Prediction of the coding sequences of unidentified human genes. VI. "Prediction of the coding sequences of No new genes (KIAAQ201 KIAAQ280) deduced by The coding sequences of 80 new genes (KIAAQ201 KIAAQ280) deduced by analysis of CDNA, Clones from cell line KG-1 and brain.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa, Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MYELOBLAST KIAA0230 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            112 LTRSQLELIEPE--PTMALEPSEITVAFFSHKNANVSDP----EEVPECLDSDPFPNGDL 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           315 NENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASENL 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260 CTLTIRCCCCCRRCCGCNC-CCRCCCCCCRKKRGFR----IQFQKKSEKEKTNKETETESG 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               375 AS 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=BONE MARROW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 CSLSRSCCCCRCRCC-CHCRCCRC--CCSRSRRFRSRTTLKFFQITEKGEQSLQRRIRRQ 111
                                                                                                                                                                      witchell M.S., Kan-Mitchell J., Minev B., Edman C., Deans R.J.; "Identification of a novel melanoma gene (MG50) - likely the gene for IL-1 receptor antagonist - which encodes epitopes recognized by human
                                                                                                                                                                                                                                                                                 "Assignment of a human melanoma associated gene MG50 (D2S448) to chromosome 2p25.3 by fluorescence in situ hybridization.";
                                                                                                                                                                                                                                                                                                                            weiler S.R., Taylor S.M., Deans R.J., Kan-Mitchell J., Mitchell M.S.,
                                                                                                                                                                                                                                                                                                                                              MEDLINE=95048383; PubMed=7959781;
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                         cytolytic T lymphocytes ";
cytolytic T lymphocytes ";
Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                         TISSUE=MELANOMA;
                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                     Genomics 22:243-244(1994).
                                InterPro;
                                                             InterPro;
                                                                              InterPro;
                InterPro;
                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AS 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                            D86983; BAA13219.
                                                                                                              AF200348;
                                                                                                                                                                                                                                                                                                                                                                                                                  3:321-329(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168 AA; 18931 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                              ipR002007; Anim_peroxidase.
ipR003598; Ig_c2.
     IPR000372;
                                                  IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                  IPR000483;
                                   IPR001611;
                                                                                                  1CXP
                                                                                                              AAF06354.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.8%; Score 141; 32.0%; Pred. No. : ative 20; Mismatcl
                                   Ig_MHC.
LRR.
      LRR_Nterm.
                    LRR_Cterm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT; 1496 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7A2BD279612A5E94 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.8e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11; Length 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SM00408; IGC2; 4.
SMART; SM00082; LRRCT; 1.
SMART; SM00013; LRRUT; 1.
SMART; SM00369; LRR_TYP; 4.
SMART; SM00214; VWC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003591; LRR_typ.
InterPro; IPR001007; VWF_C.
pfam; pF03098; An_peroxidase; 1.
pfam; pF00047; 19; 4.
pfam; pF00560; LRR; 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01463; LRRCT; 1. Pfam; PF00093; vwc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01208; VWFC; UNKNOWN_1.
Immunoglobulin domain.
NON_TER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PRO0457; ANPEROXIDASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
MEDLINE-21085660; PubMed=11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y., Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S., Arakawa T., Hara A., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I., Saito T., Chazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R., Saito T., Chazaki Y., Gojobori T., Baralov S., Casavant T., Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Kadota K., Matsuda T., Gissi C., King B., Kochiwa H., Fleischmann W., Gaasteriand T., Gissi C., King B., Kochiwa H., Fleischmann W., Gaasteriand T., Gissi C., King B., Quackenbush J., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
                                                                                                                                                                                                                                                                                                                                                             01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       399 PLPVDPRVNITPS------GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAF 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  339 VAGEVKTQEVTLRYEGSPARPTEVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRT 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               444 IIVQALPQFTVTPQDRVVIEGQTVDFQCEAKGNPP-----PVIAWTKGGSQLSVDRRHLV 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115 LTVQVMGELETPSVNLVVAENE----PCEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFV 169
                                                                                                                                                                                                                                                                                                                                                                                                                     Q9D4K2;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9D4K2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          499
                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-TESTIS.
                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                               4931420D14RIK
                                                                                                                                                                                                                                                                                                                                               4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               553 VEVGANVQLP----CSSQGEPEPAITWNKDGVQVTESGKFHISPEGFLTINDVGPADAG
                                                                                                                                                                                                                                                  NCBI_TaxID=10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           265 RCCCCRRRCCG 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 VLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 VAGAMENRDPP----GSGSGNEVIEGPONARVLKGSQARENCTVS-QGWKLIMWALSDMV 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---GGGINIPGVLSSLPSLGFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSSGTLR--ISGVALHDQ--GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTT 552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQDT- 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RYECVARNTIG 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            167209 MW; E9B9A7069BF1ABFF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   38; Mismatches 127; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 138; DB 4; Length 1496; pred. No. 0.0013;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        173 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
```

```
RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
SMART; SM00060; FN3; 6.
                 Pfam; PF00041; fn3; 6
Pfam; PF00047; ig; 4.
PRINTS; PR00014; FNTY
                                                          InterPro; IPR003962; FnIII_repeat.
InterPro; IPR003961; FN_III.
InterPro; IPR003598; Ig_C2.
InterPro; IPR003600; Ig_Ilke.
InterPro; IPR003006; Ig_MHC.
                                                                                                                                                    EMBL; U68725; AAB41099.1; --
EMBL; M32291; AAA41086.1; --
HSSP; P56276; ITLK.
                                                                                                                                                                                                                                                    MEDLINE=90100559; PubMed=2294591;
Fearon E.R., Cho K.R., Nigro J.M., Kern S.E., Simons J.W.,
Ruppert J.M., Hamilton S.R., Preisinger A.C., Thomas G., Kinzler K.W.,
                                                                                                                                                                                                                                                                                                                                        Keino Masu K., Masu M., Hinck L., Leonardo E.D., Chan S.S.Y.,
Culotti J.G., Tessier-Lavigne M.;
"Deleted in Colorectal Cancer (DCC) encodes a netrin receptor.";
Cell 87:175-185(1996).
                                                                                                                                                                                                    Science 247:49-56(1990).
                                                                                                                                                                                                                      "Identification of a chromosome 18q gene that is altered in colorectal
                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 387-420 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1996 (TrEMBLrel. 01, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=97015074; PubMed=8861902;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Colorectal tumor suppressor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q63155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wynshaw-Borls A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AK016467; BAB30253.1; -
MGD; MGI:1913992; 4931420D14Rik.
SEQUENCE 173 AA; 19581 MW; 147B6F155AC29FDF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             166 PNGDLAS 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           370 ASFNLAS 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110 ORRIRROLTRSQLELIEPEPTMALEPSEITVAFFSHKNANVSDP----EEVPPCLDSDPF 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       319 GYNSDEQKTTD-----TASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQ 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        260 CTLTIRCCCCRRRCCGCNC-CCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENS 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55 CSLSRSCCCCRCRCC-CYCRCCRC--CCSRSRRFRSRTTLRVRDPKFFQ--ITEKGEQSL 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.5%; Score 136.5; DB 11; Length 31.5%; Pred. No. 0.0001; ative 16; Mismatches 52; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT; 1445 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11; Length 173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
ACCOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
Q91562
                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                    Pfam: PF00041; fn3; 6.—
Pfam: PF00047; ig; 4
PRINTS; PR00014; FNNYPEIII.
SMART; SM00060; FN3; 6.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
Immunoglobulin domain; Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local !
                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                              InterPro; IPR003962; FnIII_repeat.
InterPro; IPR003961; FN_III.
InterPro; IPR003598; Ig_C2.
InterPro; IPR003500; Ig_Ilke.
InterPro; IPR003006; Ig_MHC.
217 PGSARVGNEAELRILSESGLHRQQVFLQRPSNVVAIEGQDAVLECAVS-GYPTPTIVWMQ 275
                                                                                                                                                                                                                                                                                                                                                             Dev. Biol. 166:654-665(1994).
EMBL: U10986; AAA70168.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Pierceall W.E., Reale M.A., Candia A.F., Wright C.V., Cho K.R.,
                              12 PGSGS-GNEV-----KLIMWAL 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                  "Expression of a homologue of the deleted in colorectal cancer (DCC) gene in the nervous system of developing Xenopus embryos.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=95113183; PubMed=7813784;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q91562;
Q91562;
                                                                                                                                                                                                                                                                                                                                                          ISSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumor suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                             Match
6.4%; Score 134.5; DB 13; Lengtn
Local Similarity 25.4%; Pred. No. 0.0025;
7. Compared ive 33; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
Immunoglobulin domain; Repeat.
SEQUENCE 1445 AA; 157940 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          378 QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQSSA 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        168 FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319 ISASAELTVLVPPWFLNHPSNLYAYESMDIEFECAVSGKP-VPTVNWMKNGDVVIPSDYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 274 LRGEEVI------QLRSKKYSLLGG--SNLLISNVTDDDSGTYTCVVTYKNEN 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215 RNPASTRTGNEAEVRILSDPGLHRQLYFLQRPSNVIAIEGKDAVLECCVS-GYPPPSFTW 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51 ALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 RDPPGSGSGNEV------IEGPQNARVLKGSQARFNCTVSQGW--KLIMW 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                      P40189; 1BQU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 6.5%; Score 135; DB 11; Length 1445; Similarity 25.5%; Pred. No. 0.0023;
                                                                                                                               1427 AA; 156533 MW; 61FEA12C8A674972 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                           Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             084F625954481988 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1427 AA
                                                                                               DB 13; Length 1427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90; Indels
                                                               65; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
```

Ş

53 SDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLH 110

```
당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                             ORESULT OR RESULT IN THE PROPERTY OF THE PROPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 da
                                                                                                                                                                                  PRINTS; PRO0009; TYRKINASE;

PRODOM: PRO00001; Euk_Pkinase; 1.

PRODOM: PRO000001; Euk_Pkinase; 1.

SMART; SM00408; IGc2; 2.

SMART; SM00410; IG_Like; 1.

SMART; SM00219; TyrKc; 1.

PROSITE; PS50038; FZ; 1.

PROSITE; PS50038; FZ; 1.

PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00108; PROTEIN_KINASE_TY; 1.

PROSITE; PS00109; PROTEIN_KINASE_TY; 1.

PROSITE; PS00109; PROTEIN_KINASE_TY; 1.

PROSITE; PS00228; TUBULIN_B_AUTOREG; 1.
Matches
                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUSK On MOUSE).
Mus musculus (Mouse).
Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nsk2 protein precursor MUSK OR NSK2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1996 (TrEMBLrel. 01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            061987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              376 YFQIVDGSNLR----ILGLVKSDEGYYQCIAENEAGNIQTYAQLIIPDDPAVPSSSILPSA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           321 FSADLTVMVPPQFLNHPANLYAYESMDIEFECAVSGKPS-----PTVKWTKNGEVVIPSD 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            111 GSAYLTYQYMGELFIPSVNLVVAENEPCEVTCL----PSHWTWLPDISW-ELGLLVSHSS 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-95349951; PubMed=7624144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-MYOBLAST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 432 PRDV-----VPVLVSS 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF01392; Fz; 1.
Pfam; PF00047; ig; 3.
Pfam; PF00069; Pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR002290; Ser_tnr_pkin
InterPro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR003598;
InterPro; IPR003600;
InterPro; IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           æ
                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                         Signal; Transferase
                                                                                                                                                                     ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GD-----EPVPIRTR----KYSVLGG--SNLLISNVTDDDAGAYTCVATYKNENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YYFVPEPSDLQSAVSILALTPQSNGTLTCVA-----TWKSLKARKSATVNLTVI-RC
                       ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGI:103581; Musk.
     73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000719; Euk_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR002453; Beta_tubulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR000024; Fz_domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                             1 21 F
871 AA; 97047 MW;
       Conservative
                                                                                                                                                                  Immunoglobulin domain; Serine/threonine-protein kinase
                            6.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ser_thr_pkinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 01, Created)
. 01, Last sequ
. 20, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TO THE SER/THR FAMILY OF PROTEIN KINASES
     45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                 Score 133.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                 Pred.
                                                                                                                            POTENTIAL
                                                                                                    F3C53DC6AFE702AB CRC64;
       Mismatches
                                 NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    871 AA
                                 0.0016;
                                                      DB 11; Length 871;
            127;
            Indels
            93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 216
               Gaps
```

ρy

4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62

```
QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1996 (TrEMBLrel.
01-NOV-1996 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ganju P., Walls E., Brennan J., Reith A.D.; "Cloning and developmental expression of Nsk2, a novel receptor "Cloning and developmental expression of Nsk2, a novel receptor tyrosine kinase implicated in skeletal myogenesis,."; Oncogene 11.281-290(1995).

Oncogene 11.281-290(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q61988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MUSK OR NSK2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nsk2 protein precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     209
            PROSITE; PSO0107; PROTEIN_KINASE_ATP; 1.
PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_TY; 1.
PROSITE; PS00109; PROTEIN_KINASE_TY; 1.
PROSITE; PS00109; TUBULIN_B_AUTOREG; 1.
ATP-binding; Immunoglobulin domain; Serin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=95349951; PubMed=7624144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-MYOBLAST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374 EALLCYHLFLECSPGVVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQY 320
                                                                                                                                                                                                                                                                                              InterPro; IPR000719; Euk_pkinase.
InterPro; IPR00024; Fz_domain.
InterPro; IPR003598; Ig_c2.
                                                                                                                                                                                                                                                                                                                                                           HSSP; P11362; 1FGK.
MGD; MGI:103581; Musk.
                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X86445; CAA60166.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTV 117
                                                                                    SMART; SM00408; IGC2; 2.
SMART; SM00410; IG_like; 1.
SMART; SM02219; TyTKC; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS500107; PROTEIN_K.
                                                                                                                                                               Pfam; PF001392; Fz; 1.
pfam; PF00047; 1g; 3.
pfam; PF00069; pkinase; 1.
prINTS; PR00109; TYRKINASE.
proDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                   InterPro; IPR003600;
InterPro; IPR003006;
InterPro; IPR002290;
                                                                                                                                                                                                                                                                                                                                              InterPro; IPR002453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ٥
 Signal; Transferase.
                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EVLGRILRAPESHNVTFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QVMGELFIPSVNLVVAENEPCEVTC----LPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -NALRENSRIAALE-----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RGEGYLMQGPGEKMLLVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGINIPG-----VLSSLPSLGFSLP------TWGKYGLGLAGTMLLTPTCTLTI 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RCCCCRRCCGCN-----CCCRCC-----FCCR 287
                                                                                                                                                                                                                                           IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
               Immunoglobulin domain; Serine/threonine-protein kinase
                                                                                                                                                                                                                                                         Ig_MHC.
Ser_thr_pkinase.
                                                                                                                                                                                                                                                                                      Ig_like.
                                                                                                                                                                                                                                                                                                                                                   Beta_tubulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01,
01,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 881 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
```

Mismatches

178; Indels 105; Gaps Length 869;

20;

DB 4;

```
RESULT 10
015146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

MEDLINE-96009854; PubMed=7546737;

Valenzuela D.M., Stitt T.N., DiStefano P.S., Rojas E., Mattsson K.,

Compton D.L., Nunez L., Park J.S., Stark J.L., Gles D.R., Thomas S.,

LeBeau M.M., Fernald A.A., Copeland N.G., Jenkins N.A., Burden S.J.,

Glass D.J., Yancopoulos G.D.;

"Receptor tyrosine kinase specific for the skeletal muscle lineage:

expression in embryonic muscle, at the neuromuscular junction, and
                                                                                                                                                                                                 HSSP;
                                                                                                                                                                                                        Valenzuela D.M., Rojas E., Yancopoulos G.D., Submitted (MAY-1997) to the EMBL/GenBank/DDE EMBL; AF0006464; AAB63044.1; -.
                                                                                                                                                                                                                                                                                         after injury.";
Neuron 15:573-584(1995);
                                     PRINTS;
                                                                                      InterPro; IPR003598; Ig_c2.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O15146 PRELIMINARY; PRT; 869 , 015146; 01-JAN-1998 (TrEMBLrel. 05, Created) 01-JAN-1998 (TrEMBLrel. 05, Last sequence Muscle specific tyrosine kinase receptor.
                                   Pfam; PF00069; pkinase; 1.
PRINTS; PR00109; TYRKINASE
                                                                                                                                                InterPro;
                                                                                                                                                               InterPro;
                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374 EALLCYHLFLECSPGVVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265 RCCCCRRCCGCN-----CCCRCC-----FCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR-------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209 EVLGRILRAPESHNVTFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118 QVMGELFIPSVNLVVAENEPCEVTC----LPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTV 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARENCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POCAT
                                                           PF01392; Fz; 1.
PF00047; 19; 3.
                                                                                                                                                                                                 P11362;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGGINIPG-----VLSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTI 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGEGVLMQGPGEKMLLVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAA 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -NALRENSRIAALE-----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
               PD000001; Euk_pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73;
                                                                                                                                           IPR000719; Euk_pkinase. IPR000024; Fz_domain.
                                                                                                                                                                           IPR002453; Beta_tubulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             881 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                 TYRKINASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.4%;
                                                                                                                                                                                                                       to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98435 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          45; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 133.5; DB Pred. No. 0.0016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
; EA0D0282E9B28ED7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              869 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 11; Length 881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DR DR DR DR DR DR DR DR CW SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
EMBL; Z66499; CAA91301.1;
             investigating biology.";
Science 282:2012-2018(1998).
                                                                                                                     Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
                                                                  none;
                                                                          MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                   Sims M.A
                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                      01-NOV-1996 (TremBLrel.
01-NOV-1996 (TremBLrel.
01-MAR-2002 (TremBLrel.
                                       "Genome sequence of the nematode C.elegans: A platform for
                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea
Rhabditidae; Peloderinae; Caenorhabditis
                                                                                                                                                                                                                                                              T01B7.8 protein. T01B7.8.
                                                                                                                                                                                                                                        Caenorhabditis elegans.
                                                                                                                                                                                            NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                          022048
                                                                                                                                                                                                                                                                                                                                                                                                                                      483 SSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369 QASFNLA 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430 SVPECSKLPSMHWDPTACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      313 SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHP 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374 ICNHIFQECSPGVVPTPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLL 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00408; IGc2; 3.
SMART; SM00219; TyrKc; 1.
PROSITE; PS50038; FZ; 1.
PROSITE; PS50010; PROTEIN_KINASE_ATP;
PROSITE; PS50011; PROTEIN_KINASE_DOM;
PROSITE; PS00109; PROTEIN_KINASE_TYR;
PROSITE; PS00228; TUBULIN_B_AUTOREG; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATP-binding; Immunoglobulin domain; Kinase; Receptor; Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tyrosine-protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224 ----INIPGVLSSLPSLGFSL-------PTWGKVGLGLAGTMLLTPTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG----- 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 ELFIPSVNLVVAENEP-----CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              159 -SPLRENSRIAVLE------SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 GAMENRDPPGSGSGNEVIEGPONARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCRRCCGCN------CCCCCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGEVCNAVLAKDALVFLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEAL 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EVFARILRAPESHNVTFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 869 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97056 MW; 3DDC20E179FA010C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.3%; Score 132.5; DB 20.8%; Pred. No. 0.002;
                                                                                                                                                                                                                                                                                        01,
01,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55;
                                                                                                                                                                                                                                                                                   Last annotation update)
                                                                                                                                                                                                                                                                                                       Last sequence update)
                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                   PRT;
```

164 AA

B

δÃ

δÃ

밁

```
RESULT 12
Q17641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DR DR DR DR DR DR DR DR DR
                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1.
PROSITE; PS000269; DEFENSIN; UNKNOWN_1.
PROSITE; PS00022; EGF_1; UNKNOWN_1.
PROSITE; PS01208; VMFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1996 (TrEMBLrel. 01, Created)
01-OCT-2001 (TrEMBLrel. 18, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Hypothetical 20.6 kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q17641;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q17641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                               "Direct Submission."; submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases. EMBL; U55854; AAK68161.1; -
                                                                                                                                                                                                                                                                          STRAIN-BRISTOL N2;
Anderson K., Chissoe S.;
"The sequence of C. eleg
                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=BRISTOL N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditidae; Peloderinae; Caenorhabditis.
                        Hypothetical SEQUENCE 1
                                                    PROSITE; PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1.
PROSITE; PS000269; DEFENSIN; UNKNOWN_1.
PROSITE; PS00022; EGF_1; UNKNOWN_1.
PROSITE; PS01208; VWFC; UNKNOWN_1.
                                                                                                                                                                                                                    STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                             Submitted (APR-1996) to the
                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                             Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caenorhabditis elegans.
                                                                                                           InterPro;
                                                                                                                                     InterPro;
                                                                                                                                                                                                        Waterston R.;
                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                          Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium.";
                                                                                                                                                                                                                                                                                                                                                           investigating biology.
                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       CBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102 CRTCCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              277 -- NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCCRRRCCGC
                                                                                                                        InterPro;
                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58 KRQGGCGCGCGC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LAILLAIGTFIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR001450;
IPR001271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR000561; EGF-11
IPR001007; VWF_C
                                                                                                          IPR000561;
IPR001007;
                                                                                                                       IPR001450; 4Fe4S_ferredoxin.
IPR001271; Defensin_mammal.
IPR000561; EGF-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       164 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                           197 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16499 MW;
                                                                                                                                                                                                                                                                             elegans cosmid C04G6.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Defensin_mammal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4Fe4S_ferredoxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.2%; score 129.5; DB 5 32.1%; pred. No. 0.00043; tive 11; Mismatches 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EGF-like.
                           20596 MW; FB5F9457BFB9B8AD CRC64;
                                                                                                           VWF_C
                                                                                                                                                                                                                                                              EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C002D48D36C9FCED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GCCGCGGGGG--CGCCCCRPRCCCCCRRCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 5; Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53;
Length 197;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6;
```

Query Match

6.1%;

Score 127;

DB 5;

RESULT 14
Q9DF61
ID Q9DF6
AC Q9DF6
DT 01-MA
DT 01-MA
DT 01-DE

Q9DF61

PRELIMINARY;

344 B

Q9DF61; 01-MAR-2001 (TIEMBLIEL 16, 01-MAR-2001 (TIEMBLIEL 16, 01-DEC-2001 (TIEMBLIEL 19,

Last sequence update)
Last annotation update)

Created)

```
SON DESCRIPTION OF STREET PRODUCT OF STREET PROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q95QY1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                  Query Match
Best Local :
                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-DEC-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
Hypothetical 17.0 kDa pi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Genome sequence of the nematode C. elegans: a platform investigating biology. The C. elegans Sequencing Consort Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN=BRISTOL N2;
MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Nemat
Rhabditidae; Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q95QY1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=BRISTOL N2;
Anderson K., Chissoe S.;
"The sequence of C. eleg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Caenorhabditis elegans.
                                                                                                                                                                                                                                                                    Interpro; IPR000561; EGF-like.
Interpro; IPR001007; VWF_C.
PROSITE; PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1.
PROSITE; PS00269; DEFENSIN; UNKNOWN_1.
PROSITE; PS00022; EGF_1; UNKNOWN_1.
PROSITE; PS01208; VWFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     None;
                                                                                                                                                                                                                Hypothetical SEQUENCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (NOV-2001) to the EMBL/GenBank/DDBJ EMBL; U55854; AAK68158.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Waterston R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (APR-1996) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR001450; 4Fe4S_ferredoxin
InterPro; IPR001271; Defensin_mammal.
InterPro; IPR000561; EGF_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Direct Submission.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                    260 CTLTIRCCCCRRCCGC--NCCC-RCCFCCR 287
86 CCCRPRCCCCCRRCCTCCRTCCCTRCCTCCR 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLIEEKAKKQENDEKKNREASRN-----CCDLASVEVRRPNFADYNYR 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQR 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCRPRCCCCCRRCCTCCRTCCCTRCCTCCRPCCCGCGCGCGCGGGGHFLKSTAMARPK 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTLTIRCCCCRRCCGC -- NCCC-RCCFCCRR-------KRGFRIQFQK 298
                                                                                                                                    similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                     166 AA; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        elegans cosmid C04G6.";
) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nematoda; Chromadorea;
                                                                                                                                                                                                                        16971 MW; 9D9D130351BB50F1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29.6%;
                                                                                                                                       6.0%;
64.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19, Created)19, Last sequence update)20, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 œ
•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 0.00093;
8; Mismatches 42
                                                                                                             0;
                                                                                                                                                              Score 125.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                             Pred.
                                                                                                                Mismatches
                                                                                                                                             No. 0.001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       166 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rhabditida; Rhabditoidea;
                                                                                                                                                                    DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42;
                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Consortium.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                    Length 166;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26;
                                                                                                                      ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                      Ν
```

OBCAM alpha 1 isoform.

```
Q9DBPO ID Q9DBP AC Q9DBPO TO 1-JU DT 01-JU DT 01-JU DT 01-JU DT SOLUT GN SLC34 OS MUS m OC EUKAR OC MAMMA OX NCBI.
RN [1]
RP ESTRAI RX MEDLII RX MEDLII RX MEDLII RA AIZAKA RA AIZAKA RA AIZAKA RA AIZAKA RA SAITO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
STRAIN-C57BL/6J; TISSUE-LUNG;
MEDLINE-21085660; PubMed-11217851;
Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito
                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
501_JUN-2002 (TrEMBLrel. 21, Last annotation update)
501_JUN-2002 (TremBLrel. 21, Last annotation update)
501_JUN-2001 (TremBLrel. 17, Created)
501_JUN-2001 (TremBLrel. 17, Last sequence update)
501_JUN-2002 (TremBLrel. 17, L
                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9DBP0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9BBP0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00409; IG; 3.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-20499204; PubMed-11042360;
Lodge A.P., Howard M.R., McNamee C.J., Moss D.J.;
"Co-localisation, heterophilic interactions and regulated expression of IgLON family proteins in the chick nervous system.";
brain Res. Mol. Brain Res. 82:84-94(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           255 ---WEKEDTRLA 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 LPTWGKVGLGLA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          196 SGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKNTGASVGQKGILQCEASAVPVAEFQ 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  133 AENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79 QGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44 NVTVRQGESATLRCTVDDRVRRVAW-LNRSTILYAGNDKWSIDNRVVILSN---TKTQY- 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 NARVLKGSQARFNCTVSQGWKLIMWALSDMVVL-----SVRPMEPIITNDRFTSQRYD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NEGSSVTLMCLAFGRPE-----PTVTWR---+HLSGKGQGFVSEDEYLE----ITGITREQ 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NGTLTCVATWKSLKARKSATVNLTV----IRCPQDTGGGINIPGVL----SSLPSLGFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----SIKIHNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVPPQIVNISSDITV 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Res. Mol. Brain Res. 82: AF292934; AAG01877.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR003598; Ig_c2.
IPR003600; Ig_like.
IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          344 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37531 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.0%; Score 125; DB 13
25.4%; Pred. No. 0.0029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37FE6051CBF0E7B4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13; Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58;
      ян s к
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14;
```

```
В
                                           Qγ
                                                                                        Вþ
                                                                                                                              Q
                                                                                                                                                                         В
                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T., Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H., Khehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J., Schriml L.M., Staubli F., Suzuki R., Tomita M., Magner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Blake J., Boffelli D., Bojunga N., Carninci P., Gariboldi M., Gustincich M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wangshaw-Borie A. Vochida K.
                                                                                                                                                                                                                                                                                                                                      InterPro; IPR003841; Na_Pi_cotrans.
Pfam; PF02690; Na_Pi_cotrans; 1.
TIGREAMS; TIGR01013; 2a58; 1.
SEQUENCE 697 AA; 76244 MW; 2A7B9384857EF16F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                  MGD; MGI:1342284; Slc34a2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 409:685-690(2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hayashizaki Y.;
672 SKEC--
                                    347 NSSCGPPHQRADQRPPRPASHPQASFNLASPEKVSNTTV 385
                                                                                      645 R----
                                                                                                                                                              593 LPLWMHSLKPWDNV-----ISLATTC-FQRRCCCCCRVCCRVCCMVCGCKCCRCSKCC 644
                                                                                                                                                                                                       233 LPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCG-----CNC-CCRCCFCC 286
                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                     RRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQR 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AK004832; BAB23600.1; -.
                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                        6.0%;
25.8%;
-QDEGKGQVEVLSMKALSNTTV 696
                                                                                                                                                                                                                                                      12;
                                                                               ---DQGEE----EEEKEQD---IPVKASGAFDNAAM 671
                                                                                                                                                                                                                                                                               Score 125;
Pred. No. 0.
                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                             DB 11; Length 697;
                                                                                                                                                                                                                                                                               0074;
                                                                                                                                                                                                                                                      45;
                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                      61;
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                    8
```

Search completed: April 28, 2003, 21:07:38 time 41.1283

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145.5
136
132
126
125
125
122
114.5
1112.5
1112.5
1111.5
1111.5
1111.5
1111.5
1111.5
1110.5
1109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109.5
109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             April 28, 2003, 16:24:30 ; Search time 10.3692 Seconds (without alignments) 1543.990 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112892 segs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2088
1 MYAGAMENRDPPGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-729-264-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . . . o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length DB
  1092
319
764
365
3707
333
879
890
365
348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1070
862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1914
                                                                                                                                                                                                                                                                 2481
524
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1443
                                                                                                                                                                                                                   NEO1_RAT
OPCM_RAT
OPCM_RAT
PGBM_HUMAN
CSP_DROME
CD33_HUMAN
UN52_CAEEL
BUTY_MOUSE
NCA2_XENLA
A33_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CEPU_CHICK
NTRI_RAT
PTK7_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                    OPCM_BOVIN
NEO1_CHICK
SMP_COTJA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KMLS_HUMAN
G55A_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DCC_HUMAN
                                                                                                                                                 CXAR_MOUSE PGBM_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAGE_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RAGE_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPCM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEO1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CD22_MOUSE
                                                                                                                                                                                                 ICCR_DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q15109 homo sapien p43146 homo sapien p70211 mus musculu Q15746 homo sapien Q98892 gallus gall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q98892
Q90773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     090610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q14982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q92859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P35329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q13308
                                                                                                                                                                                                                                                                              Q62556 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                         8 homo sapien
9 mus musculu
9 homo sapien
2 homo sapien
3 bos taurus
4 bos taurus
4 bos taurus
6 gallus gall
6 coturnix co
                                                                                                                                                                                                    5 xenopus lae
5 homo sapien
0 drosophila
                                                                                                                                                                                                                                                                                                                                                rattus norv
6 rattus norv
6 homo sapien
1 drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gallus gall
rattus norv
                                                                                                                                                                               mus musculu
                                                                                                                                                                                                                                                                                                  homo sapien
caenorhabdi
```

AMAL_DROME FPRP_RAT

Q05793 mus musculu P15364 drosophila Q62786 rattus norv Q06418 homo sapien P78310 homo sapien Q92018 rattus norv Q24372 drosophila

RR R

SEQUENCE FROM N.A. (ISOFORM 1).

CXAR_HUMAN KILO_RAT TYO3_HUMAN

LACH_DROME

7 7 7 2	잡작	; 잠집조	RA	RR	꼽 꼽	RT RA	RP	R R R	R	2 2 E	R R R	RT	RA A	R R P	2 2 2	RI	RAX	R R	RN	8888	GN GN	E E		RAGE_	RESU								
SE C	am Su	Adv	Ma	[5]	en	Yaı Mı	Ab.	Submi	Rowen	[3]	of pro	the dr.	Sug	MED	2. T	"CL	Neeper	TIS	[1]	Hom	AGE	Adva	01-1	RAGE	LT 1		44 5	42	40	38 7	3 6 6	4 4	
OUENCE F	loid p	Advanced G	. ⊅ . o	[5] SEQUENCE FI		amamoto H.; Molecular h	SEQUENCE FF	omitted (> F		products, P of mouse ma Genomics 23	ge	Sugaya K., Inoko H., I	3-95 E EI	Biol. Ch	oning an	Neeper M.,	SUE=Lung	TLIANTE FR	o sapiens aryota; l malia; Eu	R OR RAGI	nced gly	01-NOV-1997 (Rel. 35, Cre 01-NOV-1997 (Rel. 35, Las 15-JUN-2002 (Rel. 41, Las	N C_HUMAN C152			96.5 96.5		~1	97.5	98	99	
ROM N.A.	ecursor (MAY-199	Glycation Engine cell-si	P., Richa	ROM N.A.	.s."; (JAN-2000	heterogene	FROM N.A. J., Yoneku	(FEB-199)	ers	FROM N.A.	агу 08-	in g	Fukagawa kemura 1	N.A. 37;	267	pre	Schmidt A.M., Bre))))	OM N A	Metazoa; itheria;		cosylat or advan	(Rel. 3 (Rel. 3 (Rel. 4	STAN 79: 09Y			000		.6.7	.7	.,; ,	.7	
(ISOFORM	4 4	rf ad		SI	0) to	įt	ra (IS		C., Ba	(ISOFORM	y tumor gene -419(1994).	H E	. :	ISO	:14998-15004	sion	A.M.,	Dipweq=	(ISOFORM 1	Chordata Primates	,	ion e ced g	5, Cr 5, La 1, La	DARD; 3R3;			880 1147	338	12.0	4	287	830	
FOR	4 1	ag p	- :	Ē	d	y o	H., Mi	Ę,	Baski od L	FORI	gene 4).	nan MHC recept	мат	3-78	3-15	of	Br	1 3	ORM.	dat ate		nd	Created Last su	ун 60									
RM 1).	."; he EMBL/GenBank/DDBJ databa	ducts (RAGE) and ch scavenger receptor	aillard H., Thompson	2).	he EMBL/GenBank/DDBJ databa	f the receptor for advanc	1), AND VARIANT ARG-100 gita H., Karasawa J., Y	EMBL/GenBank/DDBJ data	. 3	1).	int-3.";	class III region nea or of advanced glycos	O P., MILCO P., 107	1). 35890;	(1992).	cell f prot	tt J., Yan S.D., Wang F A.;	84.3	M 1).	a; Craniata; Vertebrata; s; Catarrhini; Hominidae;	•	n end product-specific receptor d glycosylation end products).	e update)	×		ALIGNMENTS	TYO3_RAT KMLS_RABIT	LAMP_CHICK	DJC5_MOUSE	VGL2_CVPMI	FAS2_DROME	SREC_HUMAN	
	ases.	ation dish m	Receptor fo		ses.	ed glycation	amamoto Y.,	ses.	, Anearn M.E.,	<u> </u>	,	ir the junction with sylation end himan counterpart		shi F		or advanced	Pan Y.C.			Euteleostomi; . Homo.		brecarsor.					P55146 rattus norv P29294 oryctolagus	Q98919 gallus gall	P54101 mus musculu P24506 discopyge o	por	drosophi gallus g	Q14162 homo sapien p36374 rattus norv	

```
THE REPORT OF THE FIRST PROPERTY OF THE FRENCH CONTRACTOR OF THE FRENCH
              CONFLICT
                                                          VARIANT
                                                                                                                                                                                                  VARSPLIC
                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00047; 19; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M91211; AAA03574.1; -. EMBL; D28769; BAA05958.1; -. EMBL; U89336; AAB47491.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBE outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [mmunoglobulin domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003598;
InterPro; IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003006; I9_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hudson B.I., Futers T.S.;
"Novel polymorphisms in the receptor for advanced glycation end-products (RAGE) gene.";
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-12 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE SPECIFICITY: ENDOTHELIAL CELLS.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
SIMILARITY: CONTAINS 2 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Secreted (1soform 2).

ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1
ARE PRODUCED BY ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Type I membrane protein (isoform 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nitted (NOV-1999) to the EMBL/GenBank/DDBJ databases. FUNCTION: MEDIATES INTERACTIONS OF ADVANCED GLYCOSYLATION END PRODUCTS (AGE). THESE ARE NONENZYMATICALLY GLYCOSYLATED PROTE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRODUCTS (AGE). THESE ARE NONENZYMATICALLY GLYCOSYLATED PROTEINS WHICH ACCUMULATE IN VASCULAR TISSUE IN AGING AND AT AN ACCELERATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AB036432; BAA89369.1; -. AJ133822; CAB43108.1; -. BC020669; AAH20669.1; -. AF208289; AAG35728.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RATE IN DIABETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM00410; IG_11;
SM00408; IGc2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGNC:320; AGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS00290;
                                                     100
                                                                                                                                                                                                23
343
364
31
137
252
28
144
259
259
259
259
259
275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IG_like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IG_MHC; 1
                                                                                                                                                                                                                                                                                                                                                      342
363
404
106
215
308
99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig_like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glycoprotein; Transmembrane; Repeat; Signal;
/FTId=VAR_011338.
M -> G (IN REF. 1).
                                                                                                                                                    MISSING (IN ISOFORM 2).
GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRA
VSISIIEPGEEGPTAGSVGGSSLGTLALALGILGGLGTAAL
                                                GACRTESVGGT
Q -> R.
                                                                                  PGPGDPGRPGDSRPAHWGHLVAKAATPRRGEEGPRKPGGRG
                                                                                                        ESSTGGP -> VSDLERGAGRTRRGGANCRLCGRIRAGNSS
                                                                                                                              LIGVILWQRRQRRGEERKAPENQEEEEERAELNQSEEPEAG
                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . .)
                                                                                                                                                                                                                                                                                  N-LINKED
                                                                                                                                                                                                                                                                                                                                                                   IG-LIKE V-TYPE DOMAIN.
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                       CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SPECIFIC RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GLYCOSYLATION END PRODUCT
                                                                 (IN ISOFORM 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SHOWN HERE) AND 2/RAGESEC;
                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                      (POTENTIAL).
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DCC_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Cho K.R., Oliner J.D., Simons J.W., Hedrick L., Preisinger A.C., Hedge P., Silverman G.A., Voge
                                GENE STRUCTURE, AND VARIANTS CARCINOMA HIS-1375.
MEDLINE=94245241; PubMed=8188295;
                                              GENE STRUCTURE,
                                                                         Cell 64:607-613(1991).
                                                                                                 Nigro J.M., Cho K.R., Fearc
Oliner J.D., Kinzler K.W.,
                                                                                                                       MEDLINE=91121517; PubMed=1991322;
                                                                                                                                                                      colorectal cancers.";
Science 247:49-56(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1995
01-NOV-1995
15-JUN-2002
                                                                                       "Scrambled exons
                                                                                                                                                                                                                       Fearon E.R., Cho K.R., Nigro J.M., Kern S.E., Ruppert J.M., Hamilton S.R., Preisinger A.C.,
                                                                                                                                                                                                                                           MEDLINE=90100559; PubMed=2294591; Fearon E.R., Cho K.R., Nigro J.M.
                                                                                                                                                                                                                                                                  SEQUENCE OF 1-750 FROM N.A.
                                                                                                                                                                                               "Identification of a chromosome 18q
                                                                                                                                                                                                                    Vogelstein B.;
                                                                                                                                                                                                                                                                                                Genes Dev. 8:1174-1183(1994).
                                                                                                                                                                                                                                                                                                          "The DCC gene product in cellular differentiation and colorectal tumorigenesis.";
                                                                                                                                                                                                                                                                                                                                            Vogelstein B.;
                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumor suppressor protein DCC precursor (Colorectal cancer suppressor).
                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=95011532; PubMed=7926722;
                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362 LWQRR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         268 CCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT - - NKETETESGNENSGYNSDEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 EPIITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E-PGEEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WMKD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AYLTVQVMGELFIP----SVNLVVAENEP-----CEVTCLPSHWTWLPDIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                      Cho K.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 32, Created)
(Rel. 32, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404 AA; 42802 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                               Fearon E.R., Kern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23.5%;
                                                                                                                                                                                                                                                                                                                                                   Fearon E.R.,
                                                                                                Vogelstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----QRRGEERKAPENQEEEEERAELN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 145.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PTAGSVGGSGLGTLALALGILGGLGTAALLIGVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0D584C436C30CCE7 CRC64;
                                                                                                                                                                                                                                                                                                                                                Wu T.-C., Kinzler K.W.,
                                                                                                                                                                                               gene that is altered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1447 AA
                                                                                                 В
                                                                                                            S.E., Ruppert J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.00018
 Vogelstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                       Simons J.W.,
Thomas G., K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94; Indels 123;
             Fearon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 404;
              E.R.,
                                                                                                                                                                                                                        Kinzler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  389
```

```
metastasis."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human esophageal squamous cell carcinomas and their relation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Miyake S., Nagai K., Yoshino K., Oto M., Endo M., Yuasa Y.; "Point mutations and allelic deletion of tumor suppressor gene DCC in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-94243823; PubMed=8187090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VARIANT CARCINOMA THR-168, AND VARIANT GLY-201.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genomics 19:525-531(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                carcinomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "The DCC gene: structural analysis and mutations in colorectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cancer Res. 54:3007-3010(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                            SMART; SM00060; FN3; 6.
SMART; SM00410; IG_like; 2.
SMART; SM00408; IGC2; 3.
                                                                                                                                                                                                                                                                                                                                                                                         MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR; A40098; A40098.
PIR; A38442; A38442.
                                                                                                                                                           Glycoprotein; Immunoglobulin domain; Transmembrane; Signal; Repeat; Anti-oncogene; Disease mutation; Polymorphism.

SIGNAL 1 25 POTENTIAL.
                                                                                                                                                                                                                                           PRINTS; PRODO14;
SMART; SMODO60; E
                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                          Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P56276;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                              DOMAIN
DOMAIN
 DOMAIN
                                DOMAIN
                                                                                             DOMAIN
                                                                                                             TRANSMEM
                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: IMPLICATED AS A TUMOR SUPPRESSOR GENE.

SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: FOUND IN AXONS OF THE CENTRAL AND PERIPHERAL NERVOUS SYSTEM AND IN DIFFERENTIATED CELL TYPES OF THE INTESTINE.

DISEASE: COLORECTAL TUMORS THAT LOST THEIR CAPACITY TO DISEASE: ROLORECTAL TUMORS THAT LOST THEIR CAPACITY TO DIFFERENTIATE INTO MUCUS PRODUCTING CELLS UNIFORMLY LACK DCC EXPRESSION, INACTIVATION OF DCC DUE TO ALLELIC DELETION AND/OR POINT MUTATIONS MAY CAUSE BOTH LYMPHATIC AND HEMATGENOUS POINT MUTATIONS MAY CAUSE BOTH LYMPHATIC AND HEMATGENOUS POINT MUTATIONS OF DESOPHAGEAL SQUAMOUS CELL CARCINOMAS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IL; X76132; CAA53735.1; -.

LL; M32292; AAA52751.1; -.

IL; M32288; AAA52174.1; -.

IL; M32288; AAA52175.1; ALT_SEQ.

IL; M32290; AAA52176.1; -.

IL; M63696; AAA52177.1; -.

IL; M63702; AAA52178.1; -.

IL; M63702; AAA52178.1; -.

IL; M63702; AAA52179.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M63718; AAA52180.1;
M63698; AAA52181.1;
                                                                                                                                                                                                                                                                          PF00041; fn3; 6
PF00047; 19; 4.
                                                                                                                                                                                                                                                                                                                                                                                                       HGNC:2701; DCC.
                                                                                                                                                                                                                                                                                                         | IPR003961; FN_III.rep
| IPR003962; FNIII.rep
| IPR003006; Ig_MHC.
| IPR003508; Ig_c2.
| IPR003600; Ig_11ke.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A54100
                                                                                                                                                                                                                                                              FNTYPEIII.
                                                   1122
1447
124
219
317
                                                                                                                                 1097
                                                                                                                                                                                                                                                                                             σ.
                                                                                                                                                                                                                                                                                                                                                            _repeat.
     POTENTIAL.
CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 1.
                                                                                                                                EXTRACELLULAR (POTENTIAL)
                                                                                                                                                 TUMOR SUPPRESSOR PROTEIN DCC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ţ
```

```
Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                          ΩY
                                                                                                                                                                                                                                                                                                                                  밁
RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                  Cooper H.M., Armes P., Britto J., Gad J., Wilks A.F.:
"Cloning of the mouse homologue of the deleted in colorectal cancer gene (mDCC) and its expression in the developing mouse embryo."; oncogene 11:2243-2254(1995).
                                                              SEQUENCE FROM N.A. (ISOFORMS A: B
STRAIN-BALB/c; TISSUB-Brain;
MEDLINE=96112625; PubMed=8570174;
                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                  p70211;
01.NOV-1997 (Rel. 35, Created)
01.NOV-1997 (Rel. 35, Last seq
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                DCC_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                                     109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215 RNPASSRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTW 273
                                                                                                                                                 Mus musculus (Mouse)
                                                                                                                                                                      Tumor suppressor protein DCC precursor
                                                                                                                                                                                                                                                                                                                                  378 QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----
                                                                                                                                                                                                                                                                                                                                                          168
                                                                                                                                                                                                                                                                                                                                                                                                                            274 LRGEEVI --
                                                                                                             NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                       427
                                                                                                                                                                                                                                                                                                            228 GVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                 51 ALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 RDPPGSGSGNEV-------IEGPQNARVLKGSQARFNCTVSQGW--KLIMW 50
                                                                                                                                                                                                                                                                                      -VLPSAP 432
                                                                                                                                                                                                                                                                                                                                                       FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIP 227
                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
1447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             161
161
261
352
94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.5%;
25.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                             ----QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNEN 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158456 MW;
                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FIBRONECTIN TYPE-III 3
FIBRONECTIN TYPE-III 4
FIBRONECTIN TYPE-III 5
FIBRONECTIN TYPE-III 6
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 136; DB 1; Length 1447; pred. No. 0.0052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MISSING (IN REF. 3).
MISSING (IN REF. 3).
MISSING (IN REF. 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /FTId=VAR_003910.
P -> H (IN A COLO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /FTId=VAR_003909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /FTId=VAR_003911.
                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4A8612766ED0471F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H (IN A COLORECTAL CARCINOMA).
                                                                                              AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (IN OESOPHAGEAL
                                                                                                                                                                                                                                   1447 AA
                                                                                              C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL). (POTENTIAL). (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
```

9.

```
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00041; fn3; 6
Pfam; PF00047; 1g; 4
PRINTS; PR00014; FNTYDEI
SMART; SM00060; FN3; 6
SMART; SM00410; IG_11ke;
SMART; SM00408; IGC2; 3
                     CARBOHYD
                                                         CARBOHYD
                                                                       CARBOHYD
                                                                                    CARBOHYD
                                                                                               CARBOHYD
                                                                                                             DISULFID
                                                                                                                         DISULFID
                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                   INIT_MET
                                                                                                                                                  DISULFID
                                                                                                                                                             DOMAIN
                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                          Repeat; Anti-oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X85788; CAA59786.1; -. HSSP; P56276; 1TLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003961;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cooper H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-BALB/c; TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Type I membrane protein.

ALTERNATIVE PRODUCTS: 2 isoforms; A (shown here) and B; are produced by alternative initiation. A third isoform: C is produced by alternative splicing.

TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED AT HIGH LEVELS IN THE DEVELOPING BRAIN AND NEURAL TUBE. IN ADULT, HIGHLY EXPRESSED IN THE BRAIN WITH VERY LOW LEVELS FOUND IN TESTIS, HEART AND THYMUS. ISOFORM C IS EXPRESSED ONLY IN THE EMBRYO.

EXPRESSED DURING MID GESTATION. LEVELS DECREASE IN LATE GESTATION AND REMAIN AT THIS LEVEL IN THE ADULT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:94869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SWISS-PROT entry is copyright. It is produced through a collaboration the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nitted (JUN-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003006;
IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR003962;
                                                                                                                                                                                                                                                                                                                                                                                       Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                             FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                              IG_like; 2.
                                                                                                                                                                                                                                                                                                 1122
                                                                                                                                                                                                                                                                                                                                       1447
1447
                                                                                                                                                          1042
                                                                                                                                                                       618
716
816
940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FnIII_repeat.
Ig_MHC.
Ig_c2.
                     BY S.

BY SIMILARIT:
BY SIMILARITY
BY SIMILARITY
N-LINKED (GLCNAC...)
'LINKED (GLCNAC...)
'YED (GLCNAC...)
'YED (GLCNAC...)
'YED (GLCNAC...)
'YED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FN_III.
                                                                                                                                                                                                                                                                                                                                                                   Alternative initiation; Alternative
                                                                                                                                                                                       IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 3.
  N-LINKED (
                                                                                                                                                      FIBRONECTIN TYPE-III
                                                                                                                                                                FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                             IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                 domain; Transmembrane; Signal;
                                                                                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                                                                                                                                                TUMOR SUPPRESSOR PROTEIN DCC,
                                                                                                                                                                                                                                                                                                        EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                       FOR ISOFORM B
                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
ED (GLCNAC...)
ED (GLCNAC...)
ED (GLCNAC...)
ED (GLCNAC...)
GLCNAC...)
                    (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                  splicing.
                                                                                                                                                                                                                                                                                                                               ВА
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KMLS_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
       cloning, sequencing, expre
Genomics 29:562-570(1995).
[6]
                              "The human myosin light chain kinase
                                             Potier M.-C., Chelot E., Pekarsky Y., Turnell W.G.;
                                                                         TISSUE-Hippocampus;
MEDLINE-96121365; PubMed-8575746;
                                                                                                     SEQUENCE OF 923-1914 FROM N.A.
                                                                                                                           Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                    REVISIONS
Birukov K.
                                                                                                                                                                                      Lazar V.L., Garcia J.G.N.;
"A single human myosin lig
Genomics 57:256-267(1999).
                                                                                                                                                                                                                          MEDLINE=99216419; PubMed=10198165;
                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. (ISOFORMS 2; 3A;
                                                                                                                                                                                                                                            TISSUE=Umbilical vein;
                                                                                                                                                                                                                                                                                     Submitted (MAR-2000)
                                                                                                                                                                                                                                                                                                       Birukov
                                                                                                                                                                                                                                                                                                                                              Am.
                                                                                                                                                                                                                                                                                                                                                                                        Garcia J.G.N., Lazar V.L., Gilbert-Mcclain L.I., Gallagher P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O9UIT9;
15-JUL-1998 (Rel. 36, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Myosin light chain kinase, smooth muscle and non-muscle isozymes
Tarana (MLCK) [Contains: Telokin (Kinase related protein)
                                                                                                                                                                                                                                                                                                                   REVISIONS
                                                                                                                                                                                                                                                                                                                                                          "Myosin light chain kinase in endothelium: molecular cloning and regulation.";
                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Umbilical vein endothelial cells;
MEDLINE=97304466; PubMed=9160829;
                                                                                                                                                                                                                                                                                                                                                                                     Verin A.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KMLS_HUMAN S
Q15746; Q14844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            378 QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQSSA 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168 FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                319 ISASAELTVLVPPWFLNHPSNLYAYESMDIEFECAVSGKP-VPTVNWMKNGDVVIPSDYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   274 LRGEEVI------QLRSKKYSLLGG--SNLLISNVTDDDSGTYTCVVTYKNEN 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        215 RNPASIRTGNEAEVRILSDPGLHRQLYFLQRPSNVIAIEGKDAVLECCVS-GYPPPSFTW 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51 ALSDMVVLSVRDMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108
                                                                                                                                                                                                                                                                                                                                         J. Respir. Cell Mol. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOCAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 RDPPGSGSGNEV------IEGPQNARVLKGSQARFNCTVSQGW--KLIMW 50
                                                                                                                                                 K.G., Garcia J
                                                                                                                                                                                                                                                                                                     K.ດ.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1447 AA;
                                                                                                                                              Garcia J.G.N.;
                                                                                                                                                                                                                                                                                                 Garcia J.G.N.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q16794; 095796;
                                                                                                                                                                                                                                                                                                                                                                                                                                        (ISOFORM 1)
                    expression,
                                                                                                                                                                                                                                                                               to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.5%;
                                                                                                                                                                                             _light chain kinase gene (MLCK; MYLK).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158298 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 132; DB 1
Pred. No. 0.011;
                                                                                                                                                                                                                                                                                                                                      16:489-494(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
             nase (MLCK) from hippocampus:
and localization to 3qcen-q21.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          095797; 095798; 095799; 09UBG5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OD1F1097C22D5B9F CRC64;
                                                                                                                                                                                                                                                      3B AND 4).
                                                    Gardiner K., Rossier J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1914 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 1447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
Watterson D.M., Schavocky J.P., Guo L., Weiss C., Chlenski A., Shrinsky V.P., Van Eldik L.J., Haiech J.; Shrinsky v.P., Van Eldik L.J., Haiech J.; analysis of the kinase-related protein gene found at human chromosome 3q21 in a multi-gene cluster: organization, expression, alternative splicing and nolumorphic marker."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watterson M.D.;

Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.

Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.

FUNCTION: CALCIUM/CALMODULIN-DEPENDENT ENZYME RESPONSIBLE FOR THE PUNCTION: CALCIUM/CALMODULIN-DEPENDENT ENZYME RESPONSIBLE FOR SMOOTH MUSCLE COMTRACTION VIA PHOSPHORYLATION OF A SPECIFIC SERINE SMOOTH MUSCLE COMTROL LIGHT CHAINS (MLC), AN EVERT THAT IN THE N-TERMINUS OF MYOSIN LIGHT CHAINS (MLC), AN EVERT THAT FACILITATES MYOSIN INTERACTION WITH ACTIN FILAMENTS. CENTRAL DETERMINANT IN THE NERVOUS SYSTEM IT HAS BEEN SHOWN TO EDEMA FORMATION. IN THE NERVOUS SYSTEM IT HAS BEEN SHOWN TO CONTROL THE GROWTH INTIATION OF ASTROCYTIC PROCESSES IN CULTURE AND TO PARTICIPATE IN TRANSMITTER RELEASE AT SYNAPSES FORMED BETWEEN CULTURED SYMPATHETIC GANGLION CELLS. CRITICAL PARTICIPANT IN SIGNALING SEQUENCES THAT RESULT IN FIBROBLAST APOPTOSIS.

-1- CATALYTIC ACTIVITY: ATP + [myosin light-chain] = ADP + [myosin light-chain]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        splicing and polymorphic marker.";
J. Cell. Biochem. 75:481-491(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=20007838; PubMed=10536370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Lung, and Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1614-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 1456-1914 FROM N.A.
Genew; acc. 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              light-chain] phosphate.
SUBUNIT: TELOKIN BINDS CALMODULIN.
SUBUNIT: TELOKIN BINDS CALMODULIN.
ALTERNATIVE PRODUCTS: AT LEAST 3 ISOFORMS; A NON-MUSCLE FORM (THE LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL LONGEST FORM), A C-TERMINAL LONGEST FORM AND TELOKIN (A C-TERMINAL LONGEST), A MUSCLE FORM AND T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPLICING.
38, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPLICING.
39, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPLICING.
31 A WIDE VARIETY OF ADULT AND FETAL TISSUES AND IN
EXPRESSED IN A WIDE VARIETY OF ADULT AND FETAL TISSUES.
31 A WIDE VARIETY OF ADULT AND FETAL TISSUES. TELOKIN
BETHER TISSUE- NOR DEVELOPMENT-SPECIFIC. NOR-MUSCLE ISOFORM 2 IS
THE DOMINANT SPLICE VARIANT EXPRESSED IN VARIOUS TISSUES.
THE DOMINANT SPLICE VARIETY OF ADULT AND FETAL TISSUES.
AND BEEN FOUND IN A WIDE VARIETY OF ADULT AND FETAL TISSUES.
STMILARITY: BELONGS TO THE SER/THR FEMILY OF PROPERIN KINASES.
SIMILARITY: CONTAINS 1 IMMUNOCIOBULIN-LIKE C2-TYPE DOMAIN.
SIMILARITY: CONTAINS 1 FIBRONECTIN TYPE III-LIKE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L; U48959; AAC18423.2; -. AF069601; AAD15921.2; -. AF069602; AAD15922.1; -. AF069603; AAD15923.1; -. AF069604; AAD15924.1; -. X85333; CAAS9685.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALTERNATIVE PRODUCTS: AT LEAST 6 ISOFORMS; 1 (SHOWN HERE), 2, 3B, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                         AF096771; AAD51380.1; JAP096776; AAD51380.1; JAP09676; AAD51380.1; JAP09676; AAD51380.1; JAP096776; AAD51380.1; JAP096770; AAD51380.1; JAP096771; AAD54018.1; JAP096771; AAD54018.1; JAP096771; AAD51381.1; JAP096770; AAD513810; AAD513
                                                                                                                         Q63450;
                                                                            HGNC:7590; MYLK.
    IPR000719; Euk_pkinase.
                                                                                                                         CAA62378.1;
1A06.
                                                                                                                                                                                                                                                                                                                                                                                 JOINED.
JOINED.
JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOINED
```

```
InterPro;
InterPro;
                                                                                                                                                                                                                                                                                                                                                                           INIT_MET
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00014; FNTYPEIII. ProDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00047; ig; 8.
Pfam; PF00069; pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00041; fn3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR003600;
InterPro; IPR002290;
                                                                                                                                                                                                                                                                                                                          ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interpro; IPR003961;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                              REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alternative initiation;
                CONFLICT
                                                                                      CONFLICT
                                                                                                                VARSPLIC VARSPLIC
                                                                                                                                                                                                                                          REPEAT
REPEAT
                                                                                                                                                                                                                                                             REPEAT
REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                                                          BINDING
                                                                                                                                                                                                                                                                                                                                                     NP_BIND
                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                INIT_MET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATP-binding;
                                                                                                                                                                                                                        REPEAT
                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                       REPEAT
CONFLICT
                                                                     CONFLICT
                                                                               CONFLICT
                                                                                                         CONFLICT
                                                                                                                                                    VARSPLIC
                                                                                                                                                                      VARSPLIC
                                                                                                                                                                                                VARSPLIC
                                                                                                                                                                                                         REPEAT
                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                   REPEAT
         CONFLICT
                                          CONFLICT
                                                     CONFLICT
                                                             CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM00060; FN3; 1.
SM00410; IG_like; 1.
SM00408; IGC2; 8.
SM00220; S_TKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS00107; PROTEIN_KINASE_ATP; 1
PS00108; PROTEIN_KINASE_ST; 1
PS50011; PROTEIN_KINASE_DOM; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003962;
                                                                                                                                                                                                                                                                                                                                                                                                                        1761
                                                                                                                                                     1473
                                                                                                                                                                                                                                   1004
                                                                                                                                                                      1433
                                                                               933
963
1022
1048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0011; proTEIN_KINASE_DOM; 1.
Serine/threonine-protein kinase; Calmodulin-bin
Phosphorylation; Immunoglobulin domain; Repeat;
                                                                                                                                                                                                                                                                                                                                                     1761
1413
1719
1774
1774
1891
                                                                                                                                                                                                                                                                                                                                                                                                                                           1914
                                                                                                                                                                                                                                                                      1493
1585
1914
1914
998
895
923
951
979
                                                                                                                                                                                                                                                                                                                                                                                                                  1914
923
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1914
                                                                                                                                                     1546
                                                                                                                                                                      1439
                                                                                                                                                                                                 1063
1003
1015
1027
1027
1039
1063
                                           1705
1790
933
963
1022
1050
1162
1210
1280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ig_MHC.
Ig_c2.
Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FN_III.
FnIII_repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ser_thr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alternative splicing.
MYOSIN LIGHT CHAIN KINASE,
                                                                                                                                                                                                                                                                                                                                                                                                                                             MYOSIN LIGHT CHAIN KINASE, SMOOTH-MUSCLE
 AAD15924).
A -> G (IN REF. ...
L -> S (IN REF. ...
T -> S (IN REF. ...
V -> C (IN REF. ...
                                                                                                                                                                                                                                                                                                                                                    IG-LIKE C2-TYPE DOMAIN. ATP (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                       CALMODULIN-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                   FOR MYOSIN LIGHT CHAIN KINASE, SMOOTH-
                                                                                                                                                                                                                                                      I-5 (INCOMPLETE).
6 x 12 AA APPROXIMATE TANDEM REPEATS.
II-1 (INCOMPLETE).
                                                                                                                                                                                                                                                                                                                                                                                PROTEIN KINASE
                                                                                                                                                                                                                                                                                                                                                                                         FIBRONECTIN TYPE-III.
                                                                                                                                                                                                                                                                                                                                                                                                 FOR TELOKIN.
                                                                                                                                                                                                                                                                                                                                                                                                         MUSCLE ISOZYME
                                                                                      MISSING (IN ISOFORM 3A AND ISOFORM 3B)
MISSING (IN ISOFORM DEL-1790).

V -> M (IN REF. 5).

S -> P (IN REF. 3; AAD15922).

P -> A (IN REF. 5).
                                                                                                                                                                              VSGIPKPEVAMFLEGTPVRRQEGSIEVYEDAGSHYLCLLKA RTRDSGTYSCTASNAQGQVSCSWTLQVER -> G (IN ISOFORM 2 AND ISOFORM 3B).
                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                              ATP (BY SIMILARITY).
ATP (BY SIMILARITY).
                                             * E L
                                                                      KPM ->
P -> L
                                                                                                                                                     ISOFORM 3B AND ISOFORM 4).
GKFGQVFRLVEKKTRKVWAGKFFKAYSAKEKENIRQEISIM
                                                                                                                                                                       DEVEVSD -> MKWRCQT (IN ISOFORM 3A,
                                                                                                                                              NCLHHPKLVQCVDAFEEKANIVMVLEIVSGGEL -> L
                                                                                                                                     (IN ISOFORM 4)
                                                                                                                                                                                                                                                                                                                    x 28
                                           > EAH (IN REF. 3; A) (IN REF. 5). P (IN REF. 3; A) O (IN REF. 3; A) O (IN REF. 3; A)
                                                                                                                                                                                                                                                                                                                    AA APPROXIMATE TANDEM REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Calmodulin-binding;
  5555
                                              AAD15922/AAD15923).
AAD15922/AAD15923/
                                                                          AAD15922/AAD15923).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON-MUSCLE
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Wilson D.J.A., Kim D.-S., Clarke G.A., Marshall-Clarke S., Moss D.J. A family of glycoproteins (GP55), which inhibit neurite outgrowth, are members of the Ig superfamily and are related to OBCAM, neurotrimin, LAMP and CEPU-1.";
J. Cell Sci. 109:3129-3138(1996).
                                                                                                                                                                                                                                                                                                                                                                                       G55A_CHICK
                                                                                                                                                                                                                                                                                                 01-NOV-1997 (Rel. 35, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurite inhibitor GP55-A precursor (OBCAM protein gamma isoform).
Gallus gallus (Chicken).
                                                                              MEDLINE=97157768; PubMed=9004047;
                                                                                                     SEQUENCE OF 64-337 FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                  Lodge A.P., Kim D.-S., Howard M.R., McNamee C.J., Smith N., "Cloning of CEPU-s, a secreted isoform of CEPU-1, and OBCAM chick: structural diversity of IgLON family proteins."; Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                 TISSUE-Brain;
                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                           NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                      Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                            Q98892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                               394 VVS 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        211 LTVIRCPQDTGGGI-----NIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIR 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    199 VPLQPSARVSVSEKNGMQ-VLEIHGVNQDDVGVYTCLVVNGSGKASMSAELSIQGLDSAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 159 LLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA-----TVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             144 FSASAVETRPSIMGECPPKFATKLGRVVVKEGQMGRFSCKITGRPQ-----PQVTWLKGN 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 PQNARVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGG 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KVS 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VLQKTSSSITLQAARVQ----PEPRAPGLGVLSPSGEERKRPAPPRPATFPTRQPGLGSQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQR----PPRPASHPQASFNLASPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNEN---SGYNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RSFVRETKATNSDVRKEVTNVISKESKLDSL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FI------PSV------NLVVAENE----PCEVTCLPSHWTWLPDISWELG- 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RGTFSLVIHAVHEEDRGKYTCEATNG~-SGARQVTVELTVEGSFAKQLGQPVVSKTLGDR 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRNLCIKEGATAKFEGRV-RGYPEPQVTWH-----RNGQPITSGGRFL---LDCGI 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1511
1563
1609
1639
1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -EAAAKSKNCSSPQRGGSPPWAANSQPQPP-RESKLESCKDSPRTAPQTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1511
1563
1609
1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S -> T (IN REF. 3;
I -> P (IN REF. 5)
A -> P (IN REF. 5)
G -> R (IN REF. 5)
GY -> D (IN REF. 3)
AAD15924).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 126;
                                                                                                                                                                                                                                                                    Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S -> T (IN REF. 3; A)
I -> T (IN REF. 5).
A -> P (IN REF. 5).
G -> R (IN REF. 5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.
                                                                                                                                                                                                                                                                                                                                                                                    337 AA.
                                                           Marshall-Clarke S., Moss D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; DB 1; Length 1914;
0.047;
                                                                                                                                                                                                                                                              Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; AAD15922/AAD15923).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; AAD15922/AAD15923/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels 130;
                                                                                                                                                               Moss D.J.;
cDNAs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
```

```
CEPU_CHICK
ID CEPU_C
AC Q90773
DT 01-NOV
DT 01-JUN
                                                                                                                                                                                                                                                                                                                                                                                                        υ<sub>ν</sub>
                                                                                       RESULT
                                                                                                                                     밁
                                                                                                                                                               Ş
                                                                                                                                                                                               B
                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
         CEPU_CHICK STAN
Q90773;
Q1-NOV-1997 (Rel. 3
01-NOV-1997 (Rel. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                    248
                                                                                                                                                                                               189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                       6
                                                                                                                                                               240 LPTWGKVGLGLA 251
                                                                                                                                                                                                                                             141 NEGSSYTLMCLAFGRPE-----PTVTWR----HLSGKGQGFVSEDEYLE----ITGITREQ 188
                                                                                                                                                                                                                                                                          133 AENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQS 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Repeat; Signal SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00047; ig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; Y08170; CAB41420.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunoglobulin domain;
                                                                                                                                                                                                                                                                                                      92 -----SIKIHNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVPPQIVNISSDITV 140
                                                                                                                                                                                                                                                                                                                                   79 QGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                 37 NYTYRQGESATLRCTYDDRYRRYAW-LNRSTILYAGNDKWSIDNRYYILSN----TKTQY-
                                                                                                                                                                                                                                                                                                                                                                                              26 NARVLKGSQARENCTVSQGWKLIMWALSDMVVL-----SVRPMEPIITNDRFTSQRYD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           send an email to license@isb-sib.ch).
                                                                                                                                                                                                                NGTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVL----SSLPSLGFS
                                                                                                                                    ---WFKEDTRLA 256
                                                                                                                                                                                    SGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKNTGASVGQKGILQCEASAVPVAEFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: INHIBITS NEURITE OUTGROWTH.
SUBSCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
TISSUE SPECIFICITY: RESTRICTED TO THE NERVOUS SYSTEM.
DEVELOPMENTAL STAGE: INCREASES DURING DEVELOPMENT FROM VERY LOW
LEVELS AT EMBRYONIC DAY 10 AND IS MOST ABUNDANT AFTER HATCHING.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFRAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR003006; Ig_MHC.
IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               337 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
317
337
115
201
295
108
194
288
133
277
                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.0%;
25.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36887 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                   33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEURITE INHIBITOR GP55-A (
REMOVED IN MATURE FORM (PC
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 125; DB 1;
Pred. No. 0.0066;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . . .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BAE717551856651E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 337;
                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                               58;
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                    91
                                                                                                                                                                                                                                                                                                                                                                                                                            14;
```

15-JUN-2002

(Rel. (Rel.

Last annotation Last sequence update

update;

STANDARD;

PRT;

353

35, Created)

```
δÃ
                                                                 Query Match
                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CEPU-1 protein precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is in no ways modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Neurosci. 16:1770-1779(1996).

J. Neurosci. 16:1770-1779(1996).

-i- FUNCTION: IT MAY BE A CELLULAR ADDRESS MOLECULE SPECIFIC PURKINGE CELLS. IT MAY REPRESENT A RECEPTOR OR A SUBUNIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "CEPU-1, a novel immunoglobulin superfamily molecule, is expressed developing cerebellar Purkinje cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Spaltmann F., Bruemmendorf T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-96370549; PubMed-8774445;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -1- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00410; IG_like; 1.
SMART; SM00408; IGc2; 2.
Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                             InterPro; ... ig; 3.
Pfam; PF00047; ig; 3.
prino410; ig_like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; 272497; CAA96578.1; -
                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                CHAIN
                                                                                                                                                                                                                                                                                                                                              Repeat; Signal;
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                  PROPEP
                                                                                                                                                                                                  CARBOHYD
                                                                                                SEQUENCE
                                                                                                                            LIPID
                                                                                                                                         CARBOHYD
                                                                                                              VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor. ALTERNATIVE PRODUCTS: 2 ISOFORMS; A MAJOR FORM AND A MINOR FORM (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING. TISSUE SPECIFICITY: FOUND ON THE DENDRITES, SOMATA AND AXONS OF
         26 NARVLKGSQARFNCTVSQ-----GW----KLIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEVELOPMENTAL STAGE: EXPRESSED BY DEVELOPING CEREBELLAR PURKINDE CELLS. EXPRESSION COINCIDES WITH THE GROWTH OF THE DENDRITIC TREE AFTER PURKINJE CELLS HAVE FINISHED THEIR MIGRATION FROM THE VENTRICULAR ZONE (FROM E15 UNTIL E21). EXPRESSED IN THE ADULT. SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEVELOPING PURKINJE CELLS. UNDETECTABLE ON OTHER NEURONS LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RECEPTOR COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GOLGI OR GRANULE CELLS.
                                         62;
                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003006;
                                                                                                310
353 AA;
                                       Conservative
                                                                                                                                                                                                                                                                                                                                                           Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Euteleostomi;
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ig_MHC.
                                                                                                   38736 MW;
                                                        5.8%;
                                            36;
                                                                                                                                                                                                                                                                          REMOVED IN MATURE FORM
IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
                                                                                                                 GPI-ANCHOR (POTENTIAL).
MISSING (IN MAJOR ISOFORM).
                                                                                                                                        N-LINKED (GLCNAC . . .)
N-LINKED (GLCNAC . . .)
                                                                                                                                                                        N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                   CEPU-1 PROTEIN
                                                        Pred. No. 0.
                                                                      Score 122;
                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                   N-LINKED (GLCNAC. .
                                                                                                                                                                                                                                  POTENTIAL
                                            Mismatches
                                                                                                     2550C48591EBBBA6 CRC64;
   <u>::</u>
                                                                         DB 1;
                                                             012;
                                               91;
    -
                                                                         Length 353;
                                                                                                                                                .) (POTENTIAL)
                                               Indels
                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                          (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DENDRITIC TREE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TO
A
                                                 56;
                                                 Gaps
```

```
Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 062718;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Neurotrimin precursor (GP65).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 145 INEGGNVSLTCIA---TGRPDPTITWR---HISPKAVGFISEDEYLE----ITGITREQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                     "Cloning of neurotrimin defines a new subfamily of differentially expressed neural cell adhesion molecules.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=Sprague-Dawley;
MEDLINE=95198094; PubMed=7891157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NTRI_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      190 GTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVL----SSLPSLGFSL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Struyk A.F., Canoll P.D., Wolfgang M.J., Rosen C.L., D'Eustachio P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241 PTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         253 --WYK 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42 NVTYRQGESATLRCSVDNRVTRVAWLNRSSILYAGNDKWCLDPRVVLLANTKTQYSIQ--
                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                     the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
                                                                                                                     InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like
                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                    -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                             Pfam; PF00047; ig;
                                                                                                                                                               EMBL; U16845; AAA67445.1;
                                                                                 SMART;
                                                                                             SMART;
                          CHAIN
                                          SIGNAL
                                                    Repeat; Signal
                                                                 Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VAENEPCEVTCLPSHWTWLPD--ISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLV 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKSTGVPVGQKGILMCEASAVPSADFQ-
                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                THE HINDBRAIN
                                                                                SM00410; iG_like; 1.
SM00408; iGc2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----IHDVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVSPKITETSSDIS 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND SEQUENCE OF 217-229
  31
321
344
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
    NEUROTRIMIN.
REMOVED IN MATURE FORM
IG-LIKE C2-TYPE DOMAIN
                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                344 AA
                     (POTENTIAL)
                                                                                                                                                                                                                                                           restrictions on
```

DOMAIN

CARBOHYD CARBOHYD

150 236 57 157 243 44 70 152 216 226 228 292 305

CARBOHYD

DISULFID DISULFID

CARBOHYD CARBOHYD

CARBOHYD

DOMAIN DOMAIN DISULFID

POTENTIAL. IG-LIKE C2-TYPE IG-LIKE C2-TYPE

DOMAIN 2.

Matches Query Match

59;

a collaboration

Local

Similarity

SEQUENCE CARBOHYD

Ã

LIPID

```
TISSUE-Fibroblast;
MEDLINE-97037064; PubMed-8882711;
Park S.-K., Lee H.-S., Lee S.-T.;
"Characterization of the human full-length PTK7 cDNA encoding
                                                       receptor protein tyrosine kinase-like
chick KLG.";
                                                                                                                                                                                                                                                                                                                                                                            PTK/_HUMAN STANDARD; PRT; 1070 AA. Q13308; Q13417; 30-MAY-2000 (Rel. 39, Created) 30-MAY-2000 (Rel. 39, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Tyrosine-protein kinase-like 7 precursor (Colc
                                                                                                                                                                                       TISSUE-Colon carcinoma, and Placenta;

MEDLINE=96074849; PubMed-7478540;

MOSSIE K., Jallal B., Alves F., Sures

"Colon carcinoma kinase-4 defines a n

tyrosine kinase family.";
                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                             Oncogene 11:2179-2184(1995).
                                      Biochem. 119:235-239(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26 NARVLKGSQARFNCTVSQGWKLIMWALSDMVVLS-----VRPMEPIITNDRFTSQRYDQ 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GEYECSAS-NDVAAPVVRRVNVTVNYPPYISEAKGTGVPVGQKGTLQCEASAVPSAEFQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGINIPGVL----SSLPSLGFSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EGNNISLTCIATGRPE-----PTVTWR----HISPKAVGFVSEDEYLE----IQGITREQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVSPKIVEISSDISIN 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NVTVRQGESATLRCTIONRVTRVAWLNRSTILYAGNDKWCLDPRVVLLSN----TQTQY--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44
70
152
216
284
292
305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37998 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 121;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                   precursor (Colon carcinoma kinase-4)
                                                                                                                                                                                                    Sures I., Plowman G. es a new subclass of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CBB39BE53B33B224 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches .
                                                             molecule closely related to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .014;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                  .D., Ullrich A.; the receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
         DOMAIN
DOMAIN
           DISULFID
                                                                                                                               DOMAIN
DOMAIN
                                                                                                                                                                           DOMAIN
TRANSMEM
                        DISULFID
                                        DOMAIN
                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                     SMART; SM00410; IG like; 2.
SMART; SM00408; IGC2; 5.
SMART; SM00219; TYFKC; 1.
                                                                                                 DOMAIN
                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                         PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS0011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00239; RECEPTOR_TYR_KIN_II; FALSE_NEG.
                                                                                                                                                              DOMAIN
                                                                                                                                                                                                            CHAIN
                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                      Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00109; TYRKINASE. ProDom; PD000001; Euk_pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00069;
                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00047; ig;
                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR002011; RTKinaseII.
InterPro; IPR001245; Tyr_pkinase
                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U33635; AAA87565.1; EMBL; U40271; AAC50484.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND REVISION TO 834.

Lice S.-T., Park S.-K., Lee H.-S., Ji A.R., Jung J.W.;

Submitted (NOY-2001) to the EMBL/GenBank/DDBJ databases.

-i- FUNCTION: MAY FUNCTION AS A CELL ADHESION MOLECULE. LACKS PROBABLY

THE CATALYTIC ACTIVITY OF TYROSINE KINASE. MAY BE CONNECTED TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: CONTAINS 7 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROGRESSION MARKER.

SUBCELLULAR LOCATION: Type I membrane protein.

TISSUE SPECIFICITY: HIGHLY EXPRESSED IN LUNG, LIVER, PANCREAS, KIDNEY, PLACENTA AND MELANOCYTES. WEAKLY EXPRESSED IN THYROID GLAND, OVARY, BRAIN, HEART AND SKELETAL MUSCLE. ALSO EXPRESSED IN ERYTHROLEUKEMIA CELLS. BUT NOT EXPRESSED IN COLON.

SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. INSULIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601890;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AF447167;
AF447167;
AF447170;
AF447171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PATHOPHYSIOLOGY OF COLON CARCINOMAS AND/OR MAY REPRESENT A TUMOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF447173; AAL39062
AF447174; AAL39062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AF447176; AAL39062.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF447175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AF447157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGNC:9618; PTK7
                                                                                                                                                                                                                                                 Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR000719; Euk_pkinase
                                                                                                                                                                                                                                  domain;
                                                                                                                                                                                                                                                                                                                                                                                      pkinase; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAL39062.1 JOINED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAL39062
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ig_c2.
Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ig_MHC.
                                                                                                                                                                                                                             Repeat
                                                                                                                                                                                                                                         Signal; Glycoprotein; Cell adhesion;
                                      CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1
IG-LIKE C2-TYPE DOMAIN 2
IG-LIKE C2-TYPE DOMAIN 3
IG-LIKE C2-TYPE DOMAIN 4
IG-LIKE C2-TYPE DOMAIN 4
IG-LIKE C2-TYPE DOMAIN 6
IG-LIKE C2-TYPE DOMAIN 6
IG-LIKE C2-TYPE DOMAIN 7
IG-LIKE C2-TYPE DOMAIN 7
PROTEIN KINASE;
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                             TYROSINE-PROTEIN KINASE-LIKE
                                                                                                                                                                        POTENTIAL
                                                                                                                                                                                EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                    POTENTIAL
```

RESULT PTK7_HU

æ

HUMAN

밁 δõ DЬ Ş 망 Qγ 밁 Ş В δ.

255 --WFK 257

241 PTWGK 245

190

149

134

99 80 44

ACCOMPAGE OF THE PROPERTY OF T

SEQUENCE FROM N.A

PTK7 OR CCK4.

SEQUENCE FROM N.A.

[3]

```
CD22_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CD22_MOUSE STANDARD; PRT; 862 AA.
p35329;
01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
B-cell receptor CD22 precursor (Leu-14) (B-lymphocyte cell adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONFLICT
               STRAIN-DBA/2J, and BALB/C; TISSUE-Liver;

MEDLINE-93315834; PubMed-8100843;

Law C.-L., Torres R.M., Sundberg H.A., Parkhouse R.M.,

Brannan C.I., Copeland N.G., Jenkins N.A., Clark E.A.;

Brannat C.I., Copeland N.G., Jenkins N.A., Clark E.A.;

Brannat C.I., Copeland N.G., Jenkins N.A., Clark E.A.;

Brannat C.I., Copeland N.G., Jenkins N.A., Clark E.A.;

Copelarization of the murine Cd22 locus. Mapping to chromosome 7 and characterization of two alleles.";

J. Immunol. 151:175-187 (1993).

                                                                                                                                                                                                                                                                                                                                                                                                                 molecule) (BL-CAM).
CD22 OR LYB-8.
                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 283 ----NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLFEPRVFTAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  227 VVLAPQDVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRATVFA----
                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191 TLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 VIEGPQNARVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENEPCEVTCLPSHWTWLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSILALTPQSN-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QGGNFTSEMIIHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELFIPSVNLVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VYTCHAA--NLAGORRODVNITVATVPSWLKKPQDSQLEEGKPGYLDCL 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EE---RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY-----QKGHELVLANIAESDAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                              (Mouse)
HETERODIMER OF AN ALPHA AND A BETA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILAR.

BY SIMILARTY.

BY SIMILARITY.

BY SIMILARITY.

N-LINKED (GLCNAC...)

N-LINKED (GLCNAC...) (E

"NKED (GLCNAC...) (E

"NKED (GLCNAC...) (E

"NKED (GLCNAC...) (E

"OLCNAC...)
                                                                                                                                                                                                                                                                                                                                                  Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.7%;
25.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
P-> R (IN REF. 2
S-> G (IN REF. 2
S-> G (IN REF. 2
E-> G (IN REF. 2
A-> P (IN REF. 2
A-> P (IN REF. 2
A-> P (IN REF. 2
A-> F (IN REF. 2

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 119; L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MW:
                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47CDF25B8E3698A5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      862 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 1070; .084;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 AND 3).
2 AND 3).
2 AND 3).
2F. 2 AND 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AND 3).
AND 3).
AND 3).
AND 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36;
                                                                                                                                                                                                                                                                                                                                                            Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its type by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 4.
Glycoprotein; Cell adhesion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGD; MGI:88322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Repeat; Immunoglobulin
SIGNAL 1 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00047; ig; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                               VARIANT
VARIANT
                                                                                                                                                                                                                                                                                        VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                           VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                                                               VARIANT
                                                                                                                                                                                                                                                                                                                                                                                            VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                            VARIANT
                                                                 VARIANT
                                                                                              VARIANT
                    VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Type I membrane protein.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; CD22-ALPHA AND CD22-BETA (SHOWN HERB); ARE PRODUCED BY ALTERNATIVE SPLICING.
TISSUE SPECIFICITY: B-LYMPHOCYTES.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
SIMILARITY: CONTAINS 6 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L16928; AAA02562.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR003006; Ig_MHC.
IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    116
139
168
265
275
378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368
457
544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105
                                                                                                                                                                                                                                                                                                                                                                                                                                              408
460
561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cd22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IG-LIKE V-TYPE DOWAIN
IG-LIKE C2-TYPE DOWAIN
IG-LIKE
IG-LIKE C2-TYPE DOWAIN
IG-LIKE

                    PP -> LS (IN BALB/C).

R -> G (IN BALB/C).

S -> R (IN BALB/C).

E -> G (IN BALB/C).

C -> K (IN BALB/C).

Q -> K (IN BALB/C).

V -> I (IN BALB/C).

P -> S (IN BALB/C).

R -> C (IN BALB/C).

R -> C (IN BALB/C).

R -> C (IN BALB/C).

R -> I (IN BALB/C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transmembrane; Signal; B-cell; n; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                  ⊼ O ⊅
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B-CELL RECEPTOR CD22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                                                                                                                                                             KAEP
                                                                                                                                                                                                                                                                                                                                             V (IN BALB/C).
R (IN BALB/C).
T (IN BALB/C).
                                                                                                                                                                                                                                                                                                                          -> ATKTEKDPES (IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLCNAC...
GLCNAC...
GLCNAC...
GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                           (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                               BALB/C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
```

В Qy 밁 οy

밁 ş

Š 밁

```
ACCORD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                      NEO1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Genomics 41:414-421(1997)
                                                Vielmetter J., Chen x.-N., Miskevich F., Lane R.P., Yamakawa Korenberg J.R., Dreyer W.J.;
                                                                                                                                                                                                                                                                                                                                     NEO1_HUMAN STANDARD; PRT; 1461 AA. 092859; 000340; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update)
                  (Orenberg J.R., Dreyer w.J.;
"Molecular characterization of human neogenin, a DCC-related protein,"
"Molecular characterization of human neogenin, a DCC-related protein,"
                                                                                 MEDLINE-97312699; PubMed-9169140;
                                                                                                    TISSUE=Fetal brain;
                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                 "Identification and characterization of neogenin, a DCC-related
                                                                                                                                                                                                MEDLINE=97236653; PubMed=9121761;
                                                                                                                                                                                                                             SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
                                                                                                             SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                                                                                                            Oncogene 14:1129-1136(1997).
                                                                                                                                                                                   Meyerhardt J.A., Look A.T.,
                                                                                                                                                                                                                                                                NCBI_TaxID=9606,
                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                    Neogenin precursor.
NEOl OR NGN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VARIANT
VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       799 QAPPPNNSDSVTYSVIQKRPMGDYENVNPSC 829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  331 ASLPPKSCES------SDPEQRNSSC 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        739 NSSGQSFFVRNKKARRTPLSEGPQSQGCYNPAMDDTVSYAILRFPESDMHNAGDAGTPAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 KSE-----KEKTNKETETESGNENSG-----330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         520 PRDVKVLKVSPASEIRAGQRVLLQCDFAESNPAEVRFFWKKNGSLVQEGRYLSFGSVSPE 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 472 NPQGSGS------VLKPGVLRIQKVTWDSMPVSCAACNHKCSWALPVILNVHYA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52 LSDMVVLSVRPMEPIITNDRFTSQ------RYDQGGNFTSE---MIIHNVEPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 DPPGSGSGNEVIEGPQNARVLKGSQARFN-----CTVSQGWKL----IMWA 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQ------FQK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSYRCKGT-NGIGTGESPPSTLTVYYSPETIG------KRVALG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EVTCLP-----SHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTP----QSN 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DSGNIRCSLONSRLHGSAYLTVQVMGELFIPSVNLV------VAENEPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LGFCLTI---CILAI-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TLSCESDANPPISQYTW-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSGNYNCMVNNS------IGETLSQAWNLQVLYAPRRLRVSISPGDHVMEGKKA 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                    brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808 S
96582 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 714
787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.5%;
19.1%;
                                                                                                                                                                                   Bigner S.H., Fearon E.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C -> F (IN BALB/C).
M -> T (IN BALB/C).
S -> T (IN BALB/C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 114.5; DB 1;
Pred. No. 0.15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A7662D6E87038E83 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 126;
                                                                                                               <u>ک</u>
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -FDSSGQDLHSSGQKLRLEPLEVQHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 862;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 203; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
```

```
SALA BARANA BARA
         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alternative splicing. 310NAL 1 33 CHAIN 34 1461 DOMAIN 1106 1126 TRANSMEM 1106 1126
                                                         SEQUENCE
                                                                                                        VARSPLIC
                                                                                                                                    CARBOHYD
                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00041; fn3; 6.
Pfam; PF00047; fg; 4.
PRINTS; PR00014; FNTYPEIII.
SMART; SM00060; FN3; 6.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 3.
Transmembrane; Immunoglobulin domain; Glycoprotein; Signal; Repeat;
                                                                                                                                                                                                                                                                                                                                                   DISULFID
                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; U61262; AAB17263.1; -. EMBL; U72391; AAC51287.1; -. HSSP; P02751; 1TTF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (s or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- FUNCTION: MAY BE INVOLVED AS A REGULATORY PROTEIN IN THE TRANSITION OF UNDIFFERENTIATED PROLIFERATING CELLS TO THEIR DIFFERENTIATED STATE. MAY ALSO FUNCTION AS A CELL ADHESION MOLECULE IN A BROAD SPECTRUM OF EMBRYONIC AND ADULT TISSUES.
-1- SUBCELLULAR LOCATION: Type I membrane protein.
-1- ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003006; InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003961; FN_III.
InterPro; IPR003962; FnIII_repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- TISSUE SPECIFICITY: WIDELY EXPRESSED AND ALSO IN CANCER CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601907;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGNC:7754; NEO1.
                                                      AA;
                                                 159958 MW;
       5.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IG_MHC.
                                                                                                                                                               N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 3.
  Score 113;
                                                                                                                  N-LINKED (GLCNAC. . N-LINKED (GLCNAC. .
                                                                                                 MISSING
                                                                                                                                                                                                                                                                                                                  BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                                                                                                     FIBRONECTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FIBRONECTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IG-LIKE C2-TYPE DOMAIN
IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXTRACELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NEOGENIN
                                                                             -> N (IN REF
                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY.
                                          7AAE897E69635A21 CRC64;
                                                                                            (IN ISOFORM 2).
DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                            (POTENTIAL)
                                                                                                                                                                                                                                                            (POTENTIAL).
                                                                                                                  (POTENTIAL)
                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
```

Length 1461;

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPCM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Opioid binding protein/cell adhesion molecule precursor (OBCAM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q14982;
01-NOV-1997 (Rel. 35, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding a human opioid-binding cell adhesion molecule (OBCAM)."; Gene 155:213-217(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPCM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-95237612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPCML OR OBCAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420 QAGAQL-IILEHAPATTGPLPSAPRDVVASLVSTRFIKLTW 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  253 KQPSPLVRVIGQDVVLPCVASGLPTPTIKWMKNEEALDTESSERLVLLAGGS----LEIS 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    196 DRVIKLPSGMLVISNATEGDGGLYRCVVESGGPP---KYSDEVELKVLPDPEVISDLVFL 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shark K.B., Lee N.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Occipital cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID-9606
                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                    -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                    -!- FUNCTION: BINDS OPICIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY INVOLVED IN CELL CONTACT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *Cloning, sequencing and localization to chromosome 11 of a cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Opioid-binding cell adhesion molecule) (OPCML)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18 NEVIEGPQNARVL----KGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEDIITN---- 69
                                Pfam; PF00047; ig; 3.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGc2; 2.
                                                                                                                                                                   EMBL; L34774; AAA36387.1; -.
                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              204 RKSATVNLTVIRCPQDTGGGINIP-GVLSSLPSLGFSLPTW 243
                                                                                Interpro; IPR003598; Ig_c2.
Interpro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91
                                                                                                                  InterPro;
              Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T----PTVKWVKNGDMVIPSDYFKIVKEHNLQ----VLGLVKSDEGFYQCIAENDVGNA 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DVTEDDAGTYFCIADNGNETIEAQAELTVQAQPEFLKQPTNIYAHESMDIVFECEVTGKP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NVEPSDSGNIRCSLQNSR--LHGSAYLTVQVMGELFIPSVNLVVAENE----PCEVTCLP 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SHWTWLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKA
                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                        similarity)
                                                                                                                                   600632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                  HGNC:8143; OPCML.
 Signal
                                                                                                                  IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=7721093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------DRFTSQRYD--QGGNFTSEMIIH 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No. 0.37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           368
                                                                                                                                                                                                                                                                                                                                                                                                                (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
   RAGE_BOVIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Advanced glycosylation end product-specific receptor precursor
                                                                                                                                                                                                                                                                                                                                                                                       RAGE_BOVIN
Q28173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LIPID
                             "Cloning and expression of a cell surface receptor for advanced glycosylation end products of proteins.";
J. Biol. Chem. 267:14998-15004(1992).
J. FUNCTION: MEDIATES INTERACTIONS OF ADVANCED GLYCOSYLATION END PRODUCTS (AGE). THESE ARE NONENZYMATICALLY GLYCOSYLATED PROTEINS PROTEINS AGENCY AND AT AN ACCELERATED WHICH ACCUMULATE IN VASCULAR TISSUE IN AGING AND AT AN ACCELERATED
                                                                                                                                                                                                                                                                 Bos taurus (Bovine).
Eukaryota; Metazoa;
                                                                                                                                                                                                                                       Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                               AGER OR RAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133 AENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYY----FVPEPSDLQSAVSILAL 184
                                                                                                                        Neeper M., Schmidt A.M., Brett Elliston K., Stern D., Shaw A.;
                                                                                                                                                       MEDLINE=92340547; PubMed=1378843;
                                                                                                                                                                                      SEQUENCE FROM N.A., AND PARTIAL SEQUENCE
                                                                                                                                                                                                                   NCBI_TaxID=9913;
                                                                                                                                                                                                                                                  Mammalia; Eutheria; Cetartiodactyla;
                                                                                                                                                                                                                                                                                                              (Receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193 KRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISKAKNTGVSVGQKGILSCEASAVPM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185 TPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVL----SSLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148 NEGSSVTLLCLAIGRPE-----PTVTWR-----HLSVKEGQGFVSEDEYLE----ISDI 192
-!- SUBCELLULAR LOCATION: Type I membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 252 AEFQ---WFKEETRLATGLDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236 LGFSLPTWGK----VGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44 NYTYROGESATLRCTIDDRVTRVAW-LNRSTILYAGNDKWSIDPRVIILVN---TPTQY- 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26 NARVLKGSQARENCTVSQGWKLIMWALSDMVVL-----SVRPMEDIITNDRETSQRYD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QGGNFTSEMITHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVPPQIMNISSDITV
                      RATE IN DIABETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                              for advanced glycosylation end products).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
50
150
237
237
157
244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                       Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38007 MW;
                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.48;
                                                                                                                                           Brett J., Yan S.D., Wang F., Pan Y.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 112.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IG-LIKE C2-TYPE DOMAIN 2. IG-LIKE C2-TYPE DOMAIN 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.
OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REMOVED IN MATURE FORM (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E7AD17BEA1AA3FF4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No. 0.07;
                                                                                                                                                                                                                                                                                                                                                                                                            416 AA
                                                                                                                                                                                                                                                        Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
```

```
DA ID
                                              RESULT 13
OPCM_BOVIN
                                                                                                     뫄
                                                                                                                               Ş
                                                                                                                                                              В
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
01-OCT-1989 (Rel. 12, Created)
                   P11834;
                               OPCM_BOVIN
                                                                                                  405 ----EPEAAESSTGGP 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00047; 1g; 2.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGc2; 1.
PROSITE; PS00290; IG_MHO; 1.
                                                                                                                                                                                                        336 EGTTAGSVEGPG----LETLALTLGILG--GLG------TVALLIGVIVWHRR----
                                                                                                                                                                           277 NCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPK 336
                                                                                                                                                                                                                                   219 D--TGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGC 276
                                                                                                                                                                                                                                                               282 -IKDGRPLPLPPGPMLLLPEVG-----PEDQGTYSCVATHPSHGPQESRAVSVTIIETGE 335
                                                                                                                                                                                                                                                                                        159 LLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQ 218
                                                                                                                                                                                                                                                                                                                                                                            176 TKRHPKTGLFTLHSELM----VTPARGGALHPTFSCSFTPGLPRRRALHTAPIQLRVWSEH 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_11ke.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M91212; AAA03575.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                       74 SQRYDQGGNFT--SEMIIHNVEPSDSGNIR----CS----LQNSRLHGSAYLTVQVMGE- 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                             SCESSDPEQRNSSCGPP 353
                                                                                                                                                  ------RQRKG-----QERKVPENQEEEEEERAELNQPE-
                                                                                                                                                                                                                                                                                                                      RGGEGPNVDAVPLKEVQLVV---EPEGGAVAPGGTVTLTCEAPAQPP-----PQIHW---
                                                                                                                                                                                                                                                                                                                                                          TISSUE SPECIFICITY: ENDOTHELIAL CELLS.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
SIMILARITY: CONTAINS 2 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     416
                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _domain; Glycoprotein; Transmembrane; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               352
373
416
105
214
318
318
207
207
311
25
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44182 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atement is not removed. Usage by and for commercial license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                         35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 112.5; DB Pred. No. 0.088;
                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLY-GLU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IG-LIKE C2-TYPE DOMAIN 1. IG-LIKE C2-TYPE DOMAIN 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IG-LIKE V-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADVANCED GLYCOSYLATION END PRODUCT-
SPECIFIC RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B703815573E767AE CRC64;
                          345 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                   -CEVTCLPSHWTWLPDISWELG 158
                                                                                                                                                                                                                                                                                                                                                                                                                                     95; Indels 113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
```

```
В
                                  QУ
                                                                                                                     Matches
                                                                                      Query Match
                                                                                                                   SEQUENCE
                                                                                                                                LIPID
                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                              SMART;
                                                                                                                                             CARBOHYD
                                                                                                                                                             CARBOHYD
                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                              PROPER
                                                                                                                                                                                                                                                                                                                                                     Repeat; Signal SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00047; ig; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003006; InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X12672; CAA31192.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. The use by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-OCT-1989 (Rel. 12, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Opioid binding protein/cell adhesion molecule precursor (OBCAM)
(Opioid-binding cell adhesion molecule) (OPCML).
                                                                                                                                                                                                                                                                                                                                                                     Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; S03199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY, IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bos taurus (Bovine).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
44 NVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAGNDKWSIDPRVIILVN---TPTQY- 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -(- FUNCTION: BINDS OPIOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY INVOLVED IN CELL CONTACT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ЕМВО J. 8:489-495(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein with potential roles in opioid binding and cell contact.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schofield P.R., McFarland K.C., Hayflick J.S., Wilcox J.N., Cho T.M., Roy S., Lee N.M., Loh H.H., Seeburg P.H.; "Molecular characterization of a new immunoglobulin superfamily
                        26 NARVLKGSQARFNCTVSQGWKLIMWALSDMVVL-----SVRPMEPIITNDRFTSQRYD 78
                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-89251576; PubMed-2721489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    similarity).
                                                                                                                                                                                                                                                                                                                                                                                           SM00410; IG_like;
SM00408; IGc2; 2:
                                                                        Similarity
                                                                                                                  345 AA;
                                                           Conservative
                                                                                                                                                                                                                                                      323
50
150
237
237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S03199.
                                                                                                                                                                                                                                                                                                                                                                                                        IG_like; 1.
                                                                                                                                                                                                                                                                                                                                     322
                                                                      5.3%;
                                                                                                                37914 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ig_MHC.
                                                         31; Mismatches
                                                                 Score 111.5; DB
                                                                                                                           GPI-ANCHOR (POTENTIAL)
                                                                                                                                        N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . .)
                                                                                                                                                                    N-LINKED
                                                                                                                                                                                   N-LINKED
                                                                                                                                                                                             N-LINKED
                                                                                                                                                                                                             N-LINKED
                                                                                                                                                                                                                                                              REMOVED IN MATURE FORM IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                     MOLECULE.
                                                                                                                                                                                                                                                                                                                               OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                            D1ECC8D9E7D8CB19 CRC64;
                                                                                                                                                             (GLCNAC...)
(GLCNAC...)
(GLCNAC...)
                                                                                                                                                                                                       (GLCNAC. .
                                                                                 DB 1;
                                                     96;
                                                      Indels
                                                                                 Length 345;
                                                                                                                                                  ) (POTENTIAL).
) (PROBABLE).
) (POTENTIAL).
                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                          (PROBABLE).
                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                      65;
                                                    Gaps
                                                     15;
```

οy

79 QGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVV 132

```
RESOLUTION OF THE PROPERTY OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RC STRAIL-White leghorn; TISSUE-Embryonic brain;

RX MEDLINE-95105243; PubMed-7806578;

RV Vielmetter J., Roman J.M., Dreyer W.J.;

RV Vielmetter J., Roman J.M., Dretein expressed during terminal representation, is closely related to the human tumor suppressor molecule deleted in colorectal cancer.";

RV J. Cell Biol. 127:2009-2020(1994).

RV J. Cell Biol. 127:2009-2020(1994)

CI FUNCTION MAY BE INVOLVED AS A REGULATORY PROTEIN IN THE TRANSTION OF UNDIFFERENTIATED PROLIFERATING CELLS TO THEIR CELLS TO THEIR SUBCELLULAR LOCATION: Type I membrane protein.

CI SUBCELLULAR LOCATION: Type I membrane protein.

CI SUBCELLULAR LOCATION: TRETINA, EXPRESSED ON GANGLION CELL FIBERS

CI AS SOON AS THEY BEGIN TO EXTEND THEIR AXONS.

CI SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC

SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
                                                                                                                              InterPro; IPR003600; Ig_l
pfam; PF00041; fn3; 6.
Pfam; PF00047; ig; 4.
PRINTS; PR00014; FNTYPEI:
SMART; SM00060; FN3; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           090610;

16-0CT-2001 (Rel. 40, Created)

16-0CT-2001 (Rel. 40, Last sequence update)

15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commentities requires a license agreement (See http://www.ich...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEO1_CHICK
   SMART; SM00410; IG_like; 2.
SMART; SM00408; IGC2; 2.
Transmembrane; Immunoglobulin domain; Glycoprotein; Repeat.
NON_TER 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193 KRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISKAKNTGVSVGQKGILSCEASAVPM 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             133 AENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYY----FVPEPSDLQSAVSILAL 184
                                                                                                                                                                                                                                                                                                                                                                                                                                        HSSP; P11276; 2MFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U07644; AAC59662.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252
                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR003961; FN_III.
InterPro; IPR003962; FnIII_x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             236 LGFSLPTWGKVGLGLA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SIMIQNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVPPQIMNISSDVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBFAMILY.
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NEGSSVTLLCLAIGRPE-----PTVTWR------HLSVKEGQGFVSEDEYLE----ISDI 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPQSNGTLTCVATWKSLKARKSATVNLTV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AEFQ --- WFKEDTRLA 264
                                                                                                                                                                                                                                                                IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                         IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                        FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                      Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                         _repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1443 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --IRCPQDTGGGINIPGVL----SSLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    way
```

```
LEI .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
SMP_COTJA
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                QУ
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                         QУ
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                       SMP_COTJA
Q92154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                      SMP
                                                  Dulac C., Tropak M.B., Cameron-Curry P., Rossier J., Marshak D.R.,
                                                                                                                                                                               Schwann cell myelin protein
                                        "Molecular characterization of
                                                                       MEDLINE=92153423; PubMed=1739462;
                                                                                            SEQUENCE FROM N.A., AND SEQUENCE OF
                                                                                                                NCBI_TaxID=93934;
                                                                                                                                    Archosauria; Aves;
                                                                                                                                                                                         15-JUL-1998 (Rel.
15-JUL-1998 (Rel.
15-JUN-2002 (Rel.
                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                                                                                                                                    372 GFYQCIA 378
                                                                                                                                                                                                                                                                                                                               321
                                                                                                                                                                                                                                                                                                                                                                       265 LRAGGS----LLISDVTEEDVGTYTCIADNENETIEAQAELAVQVPPEFLKRPANIYAHE
                                                                                                                                                                                                                                                                                                                                                                                                               218 VRQPSSLTKVTGQNAVFPC-VAGGFPTPYVRWTKNG--
                                                                                                                                                                                                                                                                                                                                                                                                                                  21 IEGPQNARVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRY- 77
                                                                                                                                                                                                                                                                                                                                                                                           78
                                                                                                                                                                                                                                                                                                                                                                                          -DQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAE 134
                                                                                                                                                                                                                                                                                                         GTLTCVA 196
                                                                                                                                                                                                                                                                                                                            SMDIVFECEVTGKPT-----PTVKWVKNGDVVIPSDYFKIVKEHNLQ-----VLGLVKSDE 371
                                                                                                                                                                                                                                                                                                                                                NE----PCEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1090
11111
1443
102
194
293
383
383
519
615
714
814
                                                                                                                                                                                         36, Created)36, Last sequence update)41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
286
376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176
292
456
475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.3%;
25.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   158050 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCN
                                                                                                                                                                                 precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FIBRONECTIN TYPE-III
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 111.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CYTOPLASMIC (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED
                                                                                                                                                                                                                                    PRT;
                                 the Schwann cell my
the immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    558C6795579C0E26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No. 0.49;
                                          Schwann cell myelin
                                                                                               18-28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLCNAC . . .)

(GLCNAC . . .)
                                                                                                                                                                                                                                    620 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                 120-132;
                                                                                                                                                                                                                                                                                                                                                                                                                   -----SERITED---SERFA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                           74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                 yelin protein, superfamily.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
                                                                                                 135-157
                                                                                                                                                                                                                                                                                                                                                                                                                                                             37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                              SMP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
```

SPECIFICITY: EXCLUSIVELY EXPRESSED BY MYELINATING AND

```
멍
                                       Ş
                                                                                   밁
                                                                                                                             Š
                                                                                                                                                                                                          δÃ
                                                                                                                                                                       В
                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                              ş
                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSMEM
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
    437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00047; ig; 2.
SMART; SM00410; IG_like; 1.
SMARR; SM00408; IGC2; 2.
Myelin; Glycoprotein; Cell adhesion; Transmembrane; Signal; Repeat;
                                       234 P--SLGFSLPT 242
                                                                                                                             186
                                                                                                                                                                       344
                                                                                                                                                                                                    140 VTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAV---SILALT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                           286 NL--RLLLSNVGPDDGGSFSCVAENRHGRHNRSLQLRVAYAPRAPVINGSLWVVSGDPVS 343
                                                                                                                                                                                                                                                                                                                               246 GP--TEVVEGSDVELGCEAEGRPAPLISWFRGSEVL------REEPGR 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIAMOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIAMOC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P56276; 1TLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [nterPro;
                                                                                                                                                                                                                                                                                                                                                                    23 GPQNARVLKGSQARFNCTV-SQGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGG 81
                                                                                                                                                                                                                                                                                     82 NFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVN--LVVAENEPCE 139
                                                                                                                                                                                                                                                                                                                                                                                                                                               госат
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NONMYELINATING SCHWANN CELLS AND OLIGODENDROCYTES.

DEVELOPMENTAL STAGE: FIRST SYNTHESIZED AT EMBRYONIC DAY 5, 1

REMAINS EXPRESSED BY CULTURED SCHWANN CELLS.

SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.

SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.

SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                        PARPEDGGTYSCVA--ENQHGASSTSFNISVEYPPLVLPASRCTAG-GDGVRCVCMVNSI
                                                                                                                ---PQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL 233
PDSSLVFELPT 447
                                                                                                                                                                       VTCRAE---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S83711; AAB21466.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR003006; Ig_MHC.
IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           620 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              260
346
420
431
222
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
18
517
537
537
28
151
253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216
304
391
429
488
222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           516
536
536
620
106
223
311
                                                                                                                                                                                                                                                                                                                                                                                                                                             5.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66943 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                         ω
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYTOPLASMIC (POTENTIAL).

IG-LIKE C2-TYPE DOMAIN 1.

IG-LIKE C2-TYPE DOMAIN 2.

IG-LIKE C2-TYPE DOMAIN 3.

IG-LIKE C2-TYPE DOMAIN 3.

IG-LIKE C2-TYPE DOMAIN 4.

BY SIMILARITY.

BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 111; DB : Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SCHWANN CELL MYELIN PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                            --SEPAAILTVLRGGKVMAAAIYEDHVTMEMR
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                   84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 620;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . .) (POTENTIAL).
. .) (POTENTIAL).
. .) (POTENTIAL).
. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                   ; 08
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TI
                                                                                                                                                                                                      185
                                                                                                                                                                                                                                                                                                                                                                                                                 12;
```

Search completed: April 28, 2003, 18:09:41 Job time: 14.3692 secs

```
GenCore version 5.1.4_p5_4578

Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 28, 2003, 18:09:54; Search time 19.059 Seconds (without alignments)
1946.300 Million cell updates/sec

Title: US-09-729-264-4
Perfect score: 2088
Sequence: 1 MYAGAMENRDPPGSGSGNEV...........HPQASFNLASPEKVSNTTVV 386

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224
Minimum DB seq length: 00
Maximum DB seq length: 200000000

Post-processing: Minimum Match 100%
Listing first 45 summaries

Database: PIR_73:*
1: pirl:*
3: pirl:*
3: pirl:*
3: pirl:*
3: pirl:*
4: pir4:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	σ	տ	4	ω	ผ	ب	NO	Result		
107	0	•	110.5	110.5	110.5	111	111	•	•	111.5	112	112.5	112.5	114.5	114.5	114.5	114.5	115.5	119	119.5	121	122.5	129.5	133.5	133.5	134.5	136	145.5	e TOOS	1		
5.1	5.2	5.2	ნ. ა	5. 3	5.3	5.3	5. ₃	5.3	5. ₃	5.3	5.4	5.4	5.4	ა. ა	5.5	5.5	·5.5	5.5	5.7	5.7	5. 8	5.9	6.2	6.4	6.4		6.5			Query	ď	,
391	3375	364	4391	345	338	693	620	6805	1443	345	868	416	345	26926	862	531	152	946	1070	6642	344	188	164	881	871	1427	1447	404	renden i			
2	ນ	N	N	N	N	N	N	Ν	N	2	N	Н	N	1	N	2	N	ш	N	N	N	N	N	<u>⊢</u>	۲	N	N	1	1 6	Ď		
T09058	T19821	A30521	A38096	JC1239	JC1238	S49228	JH0593	S20901	I50600	S03199	A46512	A42879	JC4025	I38344	I49583	S20900	T18975	A47299	JC4593	T29757	I56551	T15651	T24272	I48697	I48696	I51669	A54100	161596		3		
butyro	hypoti	туетота	perlecan	opioio	opioi	sodiu	Schwann	titin -	neogenin	opioi	CD22 I	ာ	opioid-	titin,	differ	titin	hypotr	ror-re	protei	protein UNC	neurotrimin	hypoth	hypoth	protei	protei	tumor	tumor	advanced		Description		
butyrophilin nomor	-	Cell	n prec	opioid-binding pro		- 5	cell myer	rabbit (f	SKO	Surpu	homolog/B lym	ced gracosara		cardiac m		7	hypothetical prote	ror-related recept		In UNC-89 - C		ا	hypothetical prote					ed glycosyla		ption		

Query Match

7.0%; Score 145.5; DB 1; Length 404;

44 45 1															
101.5															
4.4															
1449	721	890	3707	2491	5825	2295	764	1177	662	1092	1272	841	802	487	
N	N	Н	2	٢	N	N	N	N	2				N	N	
S47423	T41530	A53743	S18252	A28372	T12117	C88369	A49448	T16594	T16525	JN0635	S26180	JC5894	T13149	865133	
	hypothetical prote	protein-tyrosine x	neparan suttace pr	Insulta tike growc	poryprotern rava	protein unclose in	TITEGULAL CITASII C	hypotherical proce	nypotherical proce	neural cert admess	_	KILLET CETT THIEFOT			

ALIGNMENTS

```
Ş
                                                                                                                                                                                                               밁
                                                                                                    В
                                                                                                                                                       Ş
                                                                                                                                                                                                                                                               ρy
                                                                                                                                                                                                                                                                                                                                                                                                        C;Keywords: transmembrane protein; tumor suppressor F;1-25/Domain: signal sequence #status predicted <SIG>F;26-1447/Product: tumor suppressor protein DCC #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: GDB:119838; OMIM:120470
A; Map position: 18q21.1-18q21.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-750 <FEA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Title: Identification of a chromosome 18q gene that is altered in colorectal cancers. A;Reference number: A40098; MUID:90100559; PMID:2294591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:X76132; NID:g453209; PIDN:CAA53735.1; PID:g453210 R;Fearon, E.R.; Cho, K.R.; Nigro, J.M.; Kern, S.E.; Simons, J.W.; Ruppert, J.M.; Hamilt. Science 247, 49-56, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A54100; A40098
R;Hedrick, L.; Cho, K.R.; Fearon, E.R.; Wu, T.C.; Kinzler, K.W.; Vogelstein, B.
Genes Dev. 8, 1174-1183, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: GDB: DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M32292; NID:g181492; PIDN:AAA35751.1; PID:g181493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: A40098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A54100; MUID: 95011532; PMID: 7926722
A; Accession: A54100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Title: The DCC gene product in cellular differentiation and colorectal tumorigenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 02-Aug-1994 #sequence_revision 02-Aug-1994 #text_change 05-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumor suppressor protein DCC precursor - human
N.Alternate names: colorectal cancer suppressor DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Residues: 1-1447 <HED>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genetics
                            109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                                                                 274 LRGEEVI------QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNEN 318
                                                                                                                                                                                           215 RNPASSRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTW 273
                                                                                                                                      51 ALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 CCRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322 E-PGEEG--------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT------PTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   113 AYLTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHR 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           155 WELGLIVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219 ALRTAPIOPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                              9 RDPPGSGSGNEV------IEGPQNARVLKGSQARFNCTVSQGW--KLIMW 50
                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        64 EPIITNDRFTS-----ORYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
les 77; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII 321
                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                        6.5%;
25.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23.5%;
                                                                                                                                                                                                                                                                                                                 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34;
                                                                                                                                                                                                                                                                                                                                     Score 136; DB 2; Length 1447; Pred. No. 0.051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 0.0026;
                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QRRGEERKAPENQEEEEERAELN----
                                                                                                                                                                                                                                                                                                              101;
     <u>::</u> : - : -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94; Indels 123; Gaps
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                         50;
                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
                                                                                                                                                                                           C;Species: Mus musculus (house mouse)
C;Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 19-May-2000
C;Accession: 148696; S60738
R;Ganju, P.; Walls, E.; Brennan, J.; Reith, A.D.
Oncogene 11, 281-290, 1995
Oncogene 11, 281-290, 1995
A;Title: Cloning and developmental expression of Nsk2, a novel receptor tyrosine kina
     A;Cross-references: EMBL:X86444; NID:g929723; PIDN:CAA60165.1; PID:g929724 A;Experimental source: splice form 2
                                                                                                                                                       A; Reference number: I48696; MUID:95349951; PMID:7624144 A; Accession: I48696
                                                                                                                                                                                                                                                                                                                                                           protein-tyrosine kinase (EC 2.7.1.112) nsk2 precursor, splice form 2 - mouse N;Alternate names: receptor-type tyrosine kinase N;Contains: protein-tyrosine kinase nsk2 precursor, splice form 4
A; Accession: S60738
                                                                                                                     A;Status: nucleic acid sequence not shown; translated from GB/EMBL/DDBJ
                                                                           A; Residues: 1-871 <GAN1>
                                                                                                    A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                I48696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Pierceall, W.E.; Reale, M.A.; Candia, A.F.; Wright, C.V.; Cho, K.R.; Fearon, E.R. Dev. Biol. 166, 654-665, 1994
A;Title: Expression of a homologue of the deleted in colorectal cancer (DCC) gene in A;Reference number: I51668; MUID:95113183; PMID:7813784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession: I51669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tumor suppressor - African clawed frog
C;Species: Xenopus laevis (African clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:U10986; NID:g606873; PIDN:AAA70168.1; PID:g606874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-1427 <PIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: I51669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 PQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         376 YFQIVDGSNLR----ILGLVKSDEGYYQCIAENEAGNIQTYAQLIIPDPAVPSSSILPSA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    321 FSADLTVMÝPPQFLNHPANLYAYESMDIEFECAVSGKPS-----PTVKWTKNGEVVIPSD 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   432 PRDV-----VPVLVSS 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       111 GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTWLPDISW-ELGLLVSHSS 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217 PGSARVGNEAELRILSESGLHRQQVFLQRPSNVVAIEGQDAVLECAVS-GYPTPTIVWMQ 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378 QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                168 FYPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIP 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            53 SDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLH 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228 GYLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     319 ISASAELTYLVPPWFLNHPSNLYAYESMDIEFECTVSGKP-VPTVNWMKNGDVVIPSDYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 PGSGS-GNEV-------IEGPQNARVLKGSQARFNCTVSQGW--KLIMWAL 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YYFVPEPSDLQSAVSILALTPQSNGTLTCVA-----TWKSLKARKSATVNLTVI-RC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GD------EPVPIRTR----KYSVLGG--SNLLISNVTDDDAGAYTCVATYKNENTS 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -VLPSAP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.4%; Score 134.5; DB 25.4%; Pred. No. 0.065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65;
```

Gaps

```
A; Experimental source: splice form C; Comment: For alternate splice for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;22-871/Product: protein-tyrosine kinase nsk2, splice form 2 #status predicted <MAT2>F;22-456, A',466-871/Product: protein-tyrosine kinase nsk2, splice form 4 #status prediff.42-101/Domain: immunoglobulin homology <NMM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: EMBL: X86444; NID: g929723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-456, 'A', 466-871 <GAN2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;575-865/Domain: protein kinase homology <KIN>F;583-591/Region: protein kinase ATP-binding motif
F;222,462/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references: MGI:103308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: nsk2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;498-518/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F; 226-284/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein-tyrosine kinase (EC 2.7.1.112) nsk2 precursor, splice form 1 - mouse N;Alternate names: receptor-type tyrosine kinase N;Contains: protein-tyrosine kinase nsk2 precursor, splice form 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                               Oncogene 11, 281-290, 1995
A;Title: Cloning and developmental expression of Nsk2, a novel receptor tyrosine kinase A;Reference number: 148696; MUID:95349951; PMID:7624144
A;Accession: 148697
                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 19-May-2000 C;Accession: I48697; S60740 R;Ganju, P.; Walls, E.; Brennan, J.; Reith, A.D.
A;Accession: S60740
A;Molecule type: DNA
A;Residues: 1-456; A', 466-881 <GAN2>
A;Cross-references: EMBL:X86445; NID:g929725
A;Experimental source: splice form 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Species: Mus musculus (house mouse)
                                                                                                                                                                             A;Cross-references: EMBL:X86445; NID:g929725; PIDN:CAA60166.1; PID:g929726
                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-881 <GAN1>
                                                                                                                                                                                                                                                                            A;Status: nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase homo; keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; tyro; 1-21/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                    A; Experimental source: splice form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   209 EVLGRILRAPESHNVTFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118 QVMGELFIPSVNLVVAENEPCEVTC----LPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     159 -NALRENSRIAALE-----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 EALLCYHLFLECSPGVVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321 RGEGVLMQGPGEKMLLVFLPTTSHRDPEDAQELLIHTAWNEL------KAVSPLCRPAA 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220 TGGGINIPG-----VLSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTI 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92/Domain: immunoglobulin homology <IMM2>
84/Domain: immunoglobulin homology <IMM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTV 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RCCCCRRCCGCN-----CCCRCC-----FCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transmembrane #status predicted <TRM>
                                                                                                                                                                                                                                                                               acid sequence not shown; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               splice forms see PIR: I48697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.4%; Score 133.5; DE 21.6%; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17;
```

```
.
Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;22-881/Product: protein-tyrosine kinase nsk2, splice form 1 #status predicted <MAT1 F;22-456, A, 466-881/Product: protein-tyrosine kinase nsk2, splice form 3 #status pre F;42-101/Domain: immunoglobulin homology <IMM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Keywords: ATP; glycoprotein; phosphotransferase; rece
F;1-21/Domain: signal sequence #status predicted <SIG>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase ho C;Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross-references: MGI:103308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Comment: For alternate splice forms see PIR:I48696
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;135-192/Domain: immunoglobulin homology <IMM2>
F;226-284/Domain: immunoglobulin homology <IMM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Gene: nsk2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F;222,462/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;575-865/Domain: protein kinase homology <KIN>F;583-591/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F;498-518/Domain: transmembrane #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QУ
                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: Z19867
A; Accession: T24272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, October 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Sims,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein T01B7.8 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                        C; Genetics:
                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:Z66499; PIDN:CAA91301.1; GSPDB:GN00020; CESP:T01B7.8
                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Accession: T24272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T24272
                                           QΥ
                                                                                                                                                                                           A; Introns: 20/3; 90/2
                                                                                                                                                                                                                       A; Map position:
                                                                                                                                                                                                                                           A; Gene: CESP:T01B7.8
                                                                                                                                                                                                                                                                                          A; Experimental source: clone T01B7
                                                                                                                                                                                                                                                                                                                                          A;Residues:
                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                              Matches
                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220 TOGGTNIPG-----VLSSLPSLGFSLP-----TWGKVGLGLAGTMLLTPTCTLTI 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 209 EVLGRILRAPESHNVTFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159 -NALRENSRIAALE------SGSLRIHNVOKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
                                           157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            374 EALLCYHLFLECSPGVVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTV 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocal Similarity
                                                                                                                        TOCAT
6 LAILLAIGTFIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVMGELFIPSVNLVVAENEPCEVTC----LPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RGEGYLMQGPGEKMLLVFLPTTSHRDPEDAQELLIHTAWNEL-----KAVSPLCRPAA 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RCCCCRRCCGCN------CCCRCC--
                                                                                                                                                                                                                                                                                                                                             1-164 <WIL>
                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.4%;
                                                                                                                        6.2%; Score 129.5; DB 32.1%; Pred. No. 0.015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 133.5; DE
Pred. No. 0.046;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --FCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127;
                                                                                                         53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                       Length 164;
                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93;
                                                                                                           27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                         Gaps
                                                                                                              6,
```

В

```
В
                                                          Ş
                                                                                                              В
                                                                                                                                                     δõ
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                     C;Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Neurosci. 15, 2141-2156, 1995
A;Title: Cloning of neurotrimin defines a new subfamily of differentially expressed neuro
A;Reference number: I56551; MUID:95198094; PMID:7891157
                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross references: EMBL:U16845; NID:g755184; PIDN:AAA67445.1; PID:g755185
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues: 1-344 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Struyk, A.F.; Canoll, P.D.; Wolfgang, M.J.; Rosen, C.L.; D'Eustachio, P.; Salzer, J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 19-May-2000
C;Accession: I56551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   neurotrimin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-188 <NHA>
A;Cross-references: EMBL:U58760; NID:gl330384; PID:gl330389; PIDN:AAB00710.1; GSPDB:GN00
A;Experimental source: strain Bristol N2; clone C27A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Introns:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein C27A2.5 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        submitted to the EMBL Data Library, May 1996
A;Description: The sequence of C. elegans cosmid C27A2
A;Reference number: Z18382
A;Accession: T15651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Status: preliminary; translated from GB/EMBL/DDBJ
149 EGNNISLTCIATGRPE-----PTVTWR----HISPKAVGFVSEDEYLE----IQGITREQS 196
                                            134 ENEPCEVTCL----PSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN 189
                                                                                                                                                       80
                                                                                                                                                                                     44 NVTVRQGESATLRCTIDNRVTRVAWLNRSTILYAGNDKWCLDPRVVLLSN---TQTQY-- 98
                                                                                                                                                                                                                                 26 NARVLKGSQARFNCTVSQGWKLIMWALSDMVVLS-----VRPMEPIITNDRFTSQRYDQ 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260 CTLTIRCCCCRRRCCGC--NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86 CCCRPKCCCCCRRCCTCCRTCCCTRCCTCCR 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102 CRTCCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     277 -- NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGC 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CESP:C27A2.5
                                                                                             -----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRVH----LIVQVSPKIVEISSDISIN 148
                                                                                                                                         GGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KRQGGCGCCGCGC---
                                                                                                                                                                                                                                                                                                   59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19/3; 91/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T15651
                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                             5.8%; Score 121; DB 2
24.1%; Pred. No. 0.14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.9%; Score 122.5; DB 61.3%; Pred. No. 0.057;
                                                                                                                                                                                                                                                                                           37;
                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -GCCGCGGGGG---CGCCCCRPRCCCCCRRCCTC 101
                                                                                                                                                                                                                                                                                                                                   DB 2; Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                         93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8;
                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                    56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
--
                                                                                                                                                                                                                                                                                    13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2:
```

```
C; Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase hom
                                                  A; Map position: 6p21.1-6p12.2
                                                                                                                                       A;Molecule type: mRNA
A;Residues: 1-1070 <PAR>
A;Cross-references: GB:040271; NID:g1322231; PIDN:AAC50484.1; PID:g1322232
C;Comment: This protein is a member of receptor protein tyrosine kinase family, but p
                                                                                                                                                                                                                                                                           A; Title: Characterization of the human full-length PTK7 cDNA encoding a receptor prot A; Reference number: JC4593; MUID:97037064; PMID:8882711 A; Accession: JC4593
                                                                      A;Cross-references: GDB:134760; OMIM:601890
                                                                                                         A; Gene: GDB: PTK7
                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 16-Apr-1996 #sequence_revision 24-May-1996 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein-tyrosine kinase-related receptor PTK7 precursor - human
N;Alternate names: receptor protein tyrosine kinase-like protein (RPTK)
                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: JC4593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                           R;Park,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Map position: 1
A;Introns: 17/2; 108/3; 154/2; 211/2; 265/3; 326/2; 352/3; 426/2; 454/1; 500/1; 537/1
/3; 5917/1; 6027/1; 6061/3; 6153/2; 6515/1; 6552/3; 6609/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:AF003131; PIDN:AAB54132.1; GSPDB:GN00019; CESP:unc-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-6642 < DUZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Du, Z.; Le, T.T.; Wilson, R. submitted to the EMBL Data Library, May 1997 A;Description: The sequence of C. elegans cosmid CO9D1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: CESP:unc-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source: strain Bristol N2; clone C09D1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A:Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Reference number: Z20679
A; Accession: T29757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: T29757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein UNC-89 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                        Park, S.K.; Lee, H.S.; Lee, S.T. Biochem. 119, 235-239, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;Species: Caenorhabditis elegans
;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 03-Dec-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2240 SGTLTAKAKNAAGECETSAKVTVNGGNKKPEFVQAPQN 2277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2183 DEGEPLRWNLELDGPSPGT---EVSWLLNGQPLTKSDTVQVVDHGDGTYHVTIAEAKPEM 2239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2132 ------LKISNAKIEQTGTYKYTAQNSAGQDSKQADLKYEPNYKAPKFKSQLTDKYA 2182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2077 VVDGPKSVTIKETETAEFKATIS-GFPAPTVKWTINEKIVEESRTITTIKTEDVYT---- 2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189 NGTLTCVATWKSLKARKSATVNLT-----VIRCPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             133 AENEPCEVTCL---PSHWTWLPDISWEL-GLLVSHSSYYFVPEPSDLQSAVSILALTPQS 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPS-----VNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20 VIEGPQNARVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        197 GEYECSAS-NDVAAPVVRRVNVTVNYPPYISEAKGTGVPVGQKGTLQCEASAVPSAEFQ- 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190 GTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGINIPGVL----SSLPSLGFSL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            255 --WFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 PTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match 5.7%; Score 119.5; Local Similarity 23.4%; Pred. No. 4.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 6642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             дЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-644-271-29
                                                                                    δÃ
ğ
                                             밁
                                                                                                                                                                                                                    US-08-644-271-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 29, Application US/08644271 Patent No. 5814478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEO VETSION 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/644,2'
FILING DATE: 10-MAY-1996
                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                         TELEX:
INFORMATION FOR SEQ ID NO: 29:
SEQUENCE CHARACTERISTICS:
LENGTH: 869 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY AGENT INFORMATION:
NAME: CObert, Robert J
REGISTRATION NUMBER: 36,108
REFERENCE/DOCKET NUMBER: REG
TELECOMMUNICATION INFORMATION:
TELEPHONE: 914-345-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS
TITLE OF INVENTION: AND LIGANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: USSN 60/008,657
APPLICATION NUMBER: 15-DEC-1995
TITTING DATE: 15-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                321 RGEVCNAVLAKDALVFLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEAL 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 ----INIPGVLSSLPSLGFSL------PTWGKVGLGLAGTMLLTPTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       483 SSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430 SVPECSKLPSMHWDPTACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSS 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  313 SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHP 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374 LCNHIFQECSPGVVPTPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLL 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    268 CCRRRCCGCN------CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369 QASFNLA 375
                                                                                                                                                                                                                                         TOPOLOGY: unknown MOLECULE TYPE: protein
                                             113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD----- 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 777 Old CITY: Tarrytown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Regeneron Pharmaceuticals, Inc. STREET: 777 Old Saw Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
  63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                      STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 914-345-7721
                                                                                                                                Match 6.3%; Score 132.5; DB 2; Length 869; Local Similarity 20.8%; Pred. No. 0.0018; Local Similarity 55; Mismatches 178; Indels 105; Gaps 89; Conservative 55; Mismatches 178; Indels 105; Gaps
                                                                                    4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΝX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/644,271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REG 195A
                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <del>..</del>
_
```

									•											
Qy	Qy Db	о Оу	. Qy.	Qу	X B O	; N ; SE ; SE ; OUS-0		m m O O	യെകയ	RESU US-0	Qy Db	מט	Qy	Db QY) <u> </u>	Qy	Qy Db	Db	Qy	Db
224INIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCC 267	173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPODIGGG 223	FVPEP 17 : ESVKD 26	G 12 V 20	4 GAMENRDPPGSGSGNEVIEGÞONARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62 	Query Match 6.3%; Score 132.5; DB 4; Length 869; Best Local Similarity 20.8%; Pred. No. 0.0018; Matches 89; Conservative 55; Mismatches 178; Indels 105; Gaps	WABER OF SEQ ID NOS: 36 OFTWARE: Patentin Ver. 2.0 Q ID NO 33 LENGTH: 869 TYPE: PRT ORGANISM: Homo sapiens 9-077-955-33	R APPLICATION R FILING DATE R APPLICATION R FILING DATE	APPLICATION NUMBER: US/09/0 FILING DATE: 1998-09-10 APPLICATION NUMBER: PCT/US9 FILING DATE: 1996-12-13	33, Application US/0907/995A 5, 6413740 NFORMATION: HT: Valenzuela et al., David M. FINVENTION: NOVEL TYROSINE KIN ERENCE: REG195-B-PCT-US		369 QASENLA 375 : :: 483 SSSFSVS 489	O OVERCONDECTHING AND	313 SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHP 368	GVVPTPIPICREYCLAVKELFCAKEWLVMEEKTHRGLYRSEMHLL 4	WE TORRESOLUTION TO THE TORRESOLUTION THE TORRESOLUTION TO THE TORRESOLUTION THE TORRESOLUTION THE TORRESOLUTION THE TORRESOLUTION THE	224INIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCC 267	173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVLKCPQD1666 223	FARILRAPESHNVTFGSFVTLHCTATGIPVPTITWIENGNAVSSGSIQESVKO	17	: :::::::::::::::::::::::::::::

```
밁
                                                                                                                                                   US-08-977-767-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-977-767-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                Matches
                                                                                                                 Query Match
                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1345 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/08977767 Patent No. 5972684
                                                                                                                                                                IMMEDIATE SOURCE:
LIBRARY: GenBar
CLONE: 1532042
            414 GTCTCTGT---
                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 650-855-0555
                               190 GTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGI----NIPGVLSSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Creenwald, Sara
APPLICANT: Greenwald, Sara
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: CARBONIC ANHYDRASE VIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                  NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF
                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: si
                                                                              Local Similarity es 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483 SSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            313 SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHP 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369 QASFNLA 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430 SVPECSKLPSMHWDPTACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSS 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374 LCNHIFQECSPGVYPTPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLL 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 CCRRCCGCN------CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               321 RGEVCNAVLAKDALVFLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEAL 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CA
                                                                                                                                                                                                                                                                     1345 amino acids
                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                        650-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                  GenBank
                                                                                                                                                                                                                   Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bandman, Olga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Incyte Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Diskette
                                                                                                                                                                                                                                  single
                                                                                           6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us/08/977,767
-----GC-CGTGGGAAGCGTCAGAGCCCCGTGGATGTGGA 455
                                                                                                                                                                                                                                                                                                    ω
··
                                                                       1; Mismatches
                                                                                     Score 128.5; DB 2; Pred. No. 0.0077;
                                                                       41; Indels
                                                                                                      Length 1345;
                                                                     33;
```

```
RESULT 8
US-09-651-200-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                        GENERAL INFORMATION:
APPLICANT: Green e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-651-200-2
                                                                                                                                                                                              Sequence 4, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-651-200-2
    APPLICANT: Green et al TITLE OF INVENTION: POTITIVE OF INVENTION: LyITITLE OF INVENTION: POTITIVE OF INVENTION: PO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 2
LENGTH: 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 1596-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
PRIOR ADDITATE: 2000-08-40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-09-03
PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                           329 SDSKEDD 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      338 CESSDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289 ---ALAFYCWRK-----IKQSCEEENAGAEDQDG-----EGEGSKTALQPLKH 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278 CCCRCCFCCRRKRGFRIQFQKKSEKEKINKETETESGNENSGYNSDEQKTTDTASLPPKS 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          253 QDAHGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            218 QDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           211 TGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSC------LVRNPVLQ 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161 VSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP--- 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     153 FGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPL 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               110 HGSAYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTWLP--DISWELGL---L 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 -----HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRD 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64 EPIITNDRFTSQRYDQCGN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    45 PQRSPTGAVEVQVPEDPVVALVGTDATLHCSFSPEPGFSLTQLNLIWQLTDTKQLV---- 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 PPGSGSGNEVIEGPQNARV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPM 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        456 CGTGAAGAGGGTCCTCTATGACCCCTTCCTGCCCCCTCTGAGACTCAGCACC 507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246 VGLGLAGTMLLT-PTCTLTIRCCCCRRRCCGCNCCCRC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Match 5.9%; Score 123.5; DB 4; Local Similarity 21.3%; Pred. No. 0.0033; Cocal Similarity 50; Mismatches 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Green et al
Polypeptides Encoded Thereby
                    Polynucleotides Encoding Members of the Human Lymphocyte Activation Antigen B-7 Family and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Polynucleotides Encoding Members of the Human B Lymphocyte Activation Antigen B-7 Family and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/152383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----TSEMIIHNVEPSDSGNIRCSLQNSRL 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----CFCC 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
PRIOR APPLICATION NUMBER: 60/152383

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Homo sapiens US-09-651-200-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE:
                  SOFTWARE: Pa
SEQ ID NO 6
LENGTH: 534
                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/09651200
Patent No. 6429303
GENERAL INFORMATION:
APPLICANT: Green et al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOK AFFECTION 1999-U9 PRIOR APPLICATION NUMBER: 60/172909
PRIOR APPLICATION NUMBER: 1999-12-21
An //183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1999-1
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 2000-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                           TITLE OF INVENTION: Polynucleotides Encoding Members of the Human B TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
CURRENT FILING DATE: 2000-08-30
                                                                                    PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1999-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 441
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146 PQRSPTGAVEVQVPEDPVVALVGTDATLHCSFSPEPGFSLTQLNLIWQLTDTKQLV---- 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          390 ---ALAFYCWRK------IKQSCEEENAGAEDQDG-----EGEGSKTALQPLKH 429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            161 VSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP--- 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          202 -----HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRD 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          430 SDSKEDD 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      338 CESSDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278 CCCRCCFCCRKRGFRIQFQKKSEKEKINKETETESGNENSGYNSDEQKTTDTASLPPKS 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 354 QDAHGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218 QDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      312 TGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSC-------LVRNPVLQ 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        254 FGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPL 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 110 HGSAYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTWLP--DISWELGL---L 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 PPGSGSGNEVIEGPQNARV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPM 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 EPIITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRL 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver. 2.0
                                                             PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-02-18
                                                                                                                                                                                           1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.9%; Score 123.5; DB 4; Length 441; 21.3%; Pred. No. 0.0047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/183578
                                                                                                                                                                                                               60/152383
                                                                                                                                                                      60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50; Mismatches 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 109;
```

밁

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo sapiens US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                ; OTHER INFORMATION: Description of Unknown Organism: Sequence; OTHER INFORMATION: mz5020.protein from Figure 4. US-09-651-200-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-09-651-200-24
                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 24, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                               SEQ ID NO 24
LENGTH: 534
                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Polynucleotides Encoding Members of the Human TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62)
                                                                                                        Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Green et al TITLE OF INVENTION: Pol
                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 25
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILLING DALL. 60/
PRIOR APPLICATION NUMBER: 60/
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-
                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/.
PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                                                                        ORGANISM: Unknown
                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     523 SDSKEDD 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              347 FGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPL 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110 HGSAYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTWLP--DISWELGL---L 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295 -----HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRD 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239 PQRSPTGAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLV---- 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405 TGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 VSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP--- 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338 CESSDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483 --- ALAFVCWRK----- IKQSCEEENAGAEDQDG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 PPGSGSGNEVIEGPQNARV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPM 63
239 PORSPTGAVEVOVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLV---- 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 EPIITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRL 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                        11 PPGSGSGNEVIEGPQNARV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPM 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QDAHGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative 49; Mismatches 131; Indels 109;
                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.9%; Score 122.5; DB 4; 21.3%; Pred. No. 0.0075;
                                                                                                     5.9%; Score 122.5; DB 4;
21.3%; Pred. No. 0.0075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/152383
                                                                                          49;
                                                                                          Mismatches
                                                                                               131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --- EGEGSKTALQPLKH 522
                                                                                               Indels 109;
                                                                                                                                   Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----LVRNPVLQ 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17;
```

```
RESULT 12
US-09-540-245A-15
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-062-365-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-062-365-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                         Sequence 15, Application US/09540245A Patent No. 6270984 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/062,365
CURRENT FILING DATE: 1998-04-17
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1
LENGTH: 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09062365 Patent No. 6465422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Schmidt, Ann Marie
APPLICANT: Stern, David
TITLE OF INVENTION: METHOD FOR INHIBITING TUMOR INVASION OR SPREADING IN A
TITLE OF INVENTION: SUBJECT
FILE REFERENCE: 55424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Human
                                                                                                                                                                           300 E-PGEEG------ 321
                                                                                                                                                                                                                                                           249 WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII 299
                                                                                                                                                                                                                                                                                                                                                                                 113 AYLTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                    215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLL 256
                                                                                                                                                                                                                                                                                                155 WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                                                                                                                                          197 ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 248
                                                                                                                                                                                                                                                                                                                                                                                                                          140 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 EPIITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity hes 57; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         523 SDSKEDD 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483 ---ALAFYCWRK-----IKQSCEEENAGAEDQDG------EGEGSKTALQPLKH 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            338 CESSDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 278 CCCRCCFCCRKRGFRIQFQKKSEKEKINKETETESGNENSGYNSDEQKTIDTASLPPKS 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 447 QDAHGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218 QDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  161 VSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP--- 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           347 FGSAAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPL 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405 TGNVTTSQMANEQGLFDVHSVLRVVLGANGTYSC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110 HGSAYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTWLP--DISWELGL---L 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            295 -----HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRD 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64 EPIITNDRFTSQRYDQGGNF-----TSEMITHNVEPSDSGNIRCSLQNSRL 109
  Kid, Thomas
                     Goodman, Corey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5.8%; Score 121.5; DB 25.7%; Pred. No. 0.0048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4; Length 332;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69; Indels 69; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------LVRNPVLQ 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sest
```

```
RESULT 13
US-08-374-834-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Drosophila melanogaster US-09-540-245A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/08374834 Patent No. 5656473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: 1
SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/540,245A
CURRENT FILING DATE: 2000-03-31
PRIOR APPLICATION NUMBER: 60/065,544
PRIOR FILING DATE: 1997-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Brose, Katja
APPLICANT: Tessiter-Lavigne, Marc
TITLE OF INVENTION: Modulating Robo: Ligand Interactions
FILE REFERENCE: B98-031-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                     APPLICATION NUMBER: US 08/095,658
FILING DATE: 21-JUL-1993
ATTORNEY/ARGENT INFORMATION:
NAME: Cobert, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTOR
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                              CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 1395
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                372 PPPSVFWTKEGV 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317 TDEGTYYCEAHNNVGQISARASLIVHAPPNFT--KRPSNKKVGLN--GVV-QLPCMASGN 371
                                                                                                                                                                                                                 COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241 PT----WGKVGL 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      187 OSNGTLTCVA--TWKSLKARKSATV----NLTVIRCPODTGGGINIPGVLSSLPSLGFSL 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 YGQTATFHCSVGGDPP-----PKVLWKKEEGNIPVSRARILHD-----EKSLEISNITP 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212 IVDGGN----LLISNVEPIDEGNYKCIAQNLVGTRESSYAKLIVQVKPYFMKEPKDQVML 267
                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 19-JAN
                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                     STREET: /// CICY: Tarrytown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 ENEP----CEVTCLPSHWTWLPDISW----ELGLLVSHSSYYFVPEPSDLQSAVS:LALTP 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161 PKDTRVAKGETALLECGPPKGIPEPTLIWIKDGVPLDDLKAMSFGASSRV-----R 211
                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77 YDQGGNFTSEMIIHNVEPSDSGNIRCSLQN---SRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24 PQNARVLKGSQARFNCTVSQG--WKLIMW-----ALSDMVVLSVRPMEPIITNDRFTSQR 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66;
                                                                                                                                                                                                                                                                                                                                      1059
                                                                                                                                                                                                                                                                                                                                                                                New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                 777 Old Saw Mill River Road
                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       Regeneron Pharmaceuticals,
                                                                                                                                                                                                                                                                                                                                                                                York
                                                                                                                                                    19-JAN-1995
                Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.7%; Score 120; DB 4; Length 1395; 26.2%; Pred. No. 0.047;
                                                                                                                                                                                                                 Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                    US/08/374,834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/081,057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56; Gaps
```

```
δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: protein US-08-374-834-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-644-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08644271 Patent No. 5814478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (914) 345-7721 INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 868 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (914) 345-7400
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS
TITLE OF INVENTION: AND LIGANDS
                                                                                                    SOFTWARE: FastSEQ Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGDSALRE--- 163
                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164 -----NSRIAVLE-----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKESKGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 ELFIPSVNLVVAENEP-----CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419 RGLYRSGMH------FLPVPECSKLPSMHQDP 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   313 SGNENSGYNSDEQKTTDTASLPPKSCES----SDP 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 LCNHLFQECSPGVLPTPMPICREYCLAVKELFCA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    268 CCRRRCCGCN------CCCRCC-----FCCRRKRGFRIQFQKKSEKEKINKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               321 RGEVCDAVLVKDSLVFFNTSYPDPEEAQELLIHTAWNEL-----KAVSPLCRPAAEAL 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       220 TGGGINIPGVLSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  209 EVFARILRAPESHNVTFGSFVTLRCTAIGMP-----VPTISWIENGNAVSSGSIQENVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                            APPLICATION NUMBER: US/08/644,271 FILING DATE: 10-MAY-1996
                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                ZIP: 10591
                                                                                                                                                                                                                                                                                               CITY: Tarrytown
                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Regeneron Pharmaceuticals, STREET: 777 Old Saw Mill Road
                                          CLASSIFICATION:
                                                                                                                                                                                                                                                      COUNTRY:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 868 amino acids amino acid
                                                                                                                                                                                                                                                                               ΝY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
                                                                                                                                                                     IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.7%; Score 118; DB 1
21.0%; Pred. No. 0.037;
                                                                                                                                                    DOS
  USSN 60/008,657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42; Mismatches 151; Indels 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REG 190A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -KEWLAMEGKTH 418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-09-077-955-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-644-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/09077955A Patent No. 6413740
                                           SEQ ID NO 1
LENGTH: 868
                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/077,955A CURRENT FILING DATE: 1998-09-10
                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS AND LIGANDS FILE REFERENCE: REG195-B-PCT-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                   EARLIER APPLICATION NUMBER: 60/008,657
EARLIER FILING DATE: 1995-12-15
NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: PCT/US96/20696 EARLIER FILING DATE: 1996-12-13 EARLIER APPLICATION NUMBER: 08/644,271
                                                                                            SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                             EARLIER FILING DATE: 1996-05-10
                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Valenzuela et al., David M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 914-345-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 15-DEC-1995
ATTORNEY/AGENT INFORMATION:
NAME: Cobert, Robert J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 868 amino acids
ORGANISM: Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGDSALRE--- 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164 -----NSRIAVLE-----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 ELFIPSVNLVVAENEP------CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Cobert, Robert J
REGISTRATION NUMBER: 36,108
REFERENCE/DOCKET NUMBER: RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKESKGYCAQY 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                209 EVFARILRAPESHNVTEGSFVTLRCTAIGMP-----VPTISWIENGNAVSSGSIQENVKD 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        313 SGNENSGYNSDEQKTTDTASLPPKSCES----SDP 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      374 LCNHLFQECSPGVLPTPMPICREYCLAVKELFCA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321 RGEVCDAVLVKDSLVFFNTSYPDPEEAQELLIHTAWNEL-----KAVSPLCRPAAEAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   220 TGGGINIPGVLSSLPSLGFSLP------TWGKVGLGLAGTMLLTPTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 GAMENRDPPGSGSGNEVIEGPONARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 5.7%; Score 118; DB 2; Length 868: Local Similarity 21.0%; Pred. No. 0.037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RGLYRSGMH------FLPVPECSKLPSMHQDP 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCRRRCCGCN-----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKINKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               914-345-772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42; Mismatches 151; Indels 120; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REG 195A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----KEWLAMEGKTH 418
```

```
US-09-077-955-1
```

Оy	ф	DP OA	Qy	Оy	Qу	ФФ	M B Q u
313 419	268 374	220 321	173 264	122 209	63 164	4 113	Query Match Best Local Matches 8
SGNENSGYNSDEQKTTDTASLPPKSCESSDP 343	CCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE 312	TGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCC 267	173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQD 219	ELFIPSVNLVVAENEDCEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172	MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121	GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62 ::: :: : : : : : : : : :	Query Match 5.7%; Score 118; DB 4; Length 868; Best Local Similarity 21.0%; Pred. No. 0.037; Matches 83; Conservative 42; Mismatches 151; Indels 120; Gaps 19;

Search completed: April 28, 2003, 21:12:19 Job time : 19.0485 secs

```
OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A_Geneseq_101002:*
1: /SIDSZ/gcgdata/gc
2: /SIDSZ/gcgdata/gc
3: /SIDSZ/gcgdata/gc
4: /SIDSZ/gcgdata/gc
5: /SIDSZ/gcgdata/gc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-729-264-4
2088
1 MVAGAMENRDPPGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     April 28, 2003, 16:24:31; Search time 38.4662 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA20001.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
                                                                                                                                                                                                                                                                   /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*
                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*
                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:*
                                                                                                                                                                                                                                                                                                                                                              /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (without alignments)
1337.141 Million cell updates/sec
```

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	1	Match Length DB	Length	3 : DB	ID	Description Human B7-like p
<u>ب</u> ر	2088	100.0	386	23	AAU75541 AAU75540	Human B7-like prot
	2004	90.0	, ,	3 6	7077070	ниman B7-like
w	2000	95.8	386	2	AAU / 3342	uman B7-like
4	1576	75.5	377	23	AAU/5543	שבייין לייים
u	1318	63.1	463	22	ABG28169	NOVEL IIIIIII G
עכ	913.5	43.8	370	23	AAU75544	Mouse B/-TINE
7	572.5	27.4	631	23	AAU75547	Kac B/ Tike Pi
œ	566.5	27.1	270	23	AAU75545	Mouse by thre
ဖ	485	23.2	223	23	AAU75546	MOUSE D' - FENO
10	145.5	7.0	404	22	AAB81925	EXCIACOIPOICA

Welcher AA,

Sarmiento UM, Schultz HJ,

Chute HT;

145.5 7.0 404 23 AANE23219 Human receptor for 145.5 7.0 404 23 AANW17543 Human receptor for 145.5 7.0 404 23 AANW17543 Human receptor for 145.5 7.0 404 23 AANW17543 Human RAGE protein 145 138 6.6 1496 22 AANF01469 Human passociate 1498 23 AANF01469 Human passociate 1498 24 AANF01469 Human passociate 1498 25 AANF01498 Human passociate 1498 25 AANF01498 Human passociate 1498 25 AANF01498 Human passociate 1498 Human Pass							
145.5 7.0 404 23 AAE23219 Human rec 145.5 7.0 404 23 AAW37743 Human rec 145.5 7.0 404 23 AAW37745 Human rec 138 6.6 1496 20 AAW81030 Human rec 138 6.6 1498 21 AAY70469 Human par 138 6.6 1498 22 ABB11587 Human par 136 6.5 1447 20 AAX73498 Human par 136 6.5 1447 20 AAX33498 136 6.5 1447 21 AAR68553 Human DCC 137 6.4 467 12 AAR13144 Alternati 138 6.4 475 17 AAR94982 Human DCC 137 6.4 863 19 AAW62569 138.5 6.4 867 19 AAW62569 138.5 6.4 867 19 AAW62568 138.5 6.4 871 19 AAW62568 138.5 6.4 871 19 AAW62568 138.5 6.4 871 19 AAW62569 138.5 6.4 881 17 AAR84087 138.5 6.4 881 17 AAR84087 138.5 6.4 881 17 AAR84091 139.5 6.3 869 18 AAW265061 139.5 6.3 869 18 AAW265061 139.5 6.3 869 18 AAW26506 139.5 6.3 869 22 AAG77856 139.5 6.3 869 22 AAG77856 139.5 6.3 869 22 AAG77856 139.5 6.3 869 22 AAG7853 139.5 6.4 881 17 AAR84091 130.5 6.3 869 22 AAG7853 131.5 6.3 869 22 AAG77856 131.5 6.3 869 22 AAG77856 131.5 6.3 869 22 AAG77856 131.5 6.3 869 22 AAG77858 131.5 6.3 869 22 AAG77856 131.5 8.3 869 22 AAG77856 131.5 8.	٠,	AAUUU9US	2.2	۳	5.9	123.5	45
145.5 7.0 404 23 AAPE23219 145.5 7.0 404 23 AAVE7343 Human rec 145.5 7.0 404 23 AAVT7543 Human rec 138 6.6 1496 20 AAW81030 Human pag 138 6.6 1498 21 AAY70469 Human pag 138 6.5 1447 16 AAR81587 Deleted 1 136 6.5 1447 22 AABS1587 Deleted 1 136 6.5 1447 22 AAR53669 136 6.5 1447 22 AAR53669 137.5 6.4 467 17 AAR94982 Human DCC 133.5 6.4 475 17 AAR84087 133.5 6.4 863 19 AAW62569 Mouse rec 133.5 6.4 867 17 AAR84087 Mouse rec 133.5 6.4 871 17 AAR84087 Mouse rec 133.5 6.4 871 19 AAW62568 133.5 6.4 871 19 AAW62573 Nusk2 rece 133.5 6.4 871 19 AAW62568 133.5 6.4 871 19 AAW62573 Nusk2 rece 133.5 6.4 873 19 AAW62573 Nusk2 rece 133.5 6.3 869 18 AAW26611 Nuska rece 133.5 6.4 871 19 AAW62572 Nuska rece 133.5 6.4 871 19 AAW62572 Nuska rece 133.5 6.4 871 19 AAW62573 Nuska rece	3 5 t	AAU00904	22		•	123.5	44
145.5 7.0 404 23 AAR23219 Human rec 145.5 7.0 404 23 AAW37543 Human rec 138 6.6 1496 20 AAW31030 Human RAC 138 6.6 1498 21 AAY70469 Human PAC 138 6.5 1447 16 AAR36553 136 6.5 1447 16 AAR36553 136 6.5 1447 20 AAX31498 Human DELeted J 137 6 6.5 1447 20 AAX31498 Human DELeted J 138 6.6 1498 22 AAR3144 139 6.5 1447 21 AAR2498 139 5 6.4 467 11 AAR24982 139 5 6.4 867 11 AAR2498 139 5 6.4 867 11 AAR2569 139 5 6.4 871 17 AAR24087 139 5 6.4 871 17 AAR24087 139 5 6.4 871 17 AAR24087 139 5 6.4 871 17 AAR24092 139 5 6.4 871 17 AAR24092 139 5 6.4 871 17 AAR24092 139 5 6.4 881 19 AAW62573 139 5 6.3 869 18 AAW26501 139 5 6.3 869 18 AAW26501 131 5 6.3 869 22 AAG77858 131 6.1 594 23 ABB75753 131 6.1 594 23 ABB75753 131 708 23 ABB75753 Human pp 128 6.1 708 23 ABB75752 Human pp 129 700 700 700 700 700 700 700 700 700 70	۵ او	AAR84094	17	7		125.5	43
145.5 7.0 404 23 AAE23219 Human rec 145.5 7.0 404 23 AAW48745 145.5 7.0 404 23 AAW48745 138 6.6 1496 20 AAW81030 Human rec 138 6.6 1498 21 AAR70469 138 6.6 1498 22 ABB11587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAX33498 136 6.5 1447 20 AAX33498 137 6.5 1447 20 AAX33498 138 6.6 5 1447 21 AAR68553 138 6.4 467 12 AAR50693 139 5 6.4 467 12 AAR69583 139 5 6.4 467 12 AAR69287 139 5 6.4 467 13 AAW62569 139 5 6.4 863 19 AAW62569 139 5 6.4 873 17 AAR84087 139 5 6.4 873 19 AAW62583 139 5 6.4 873 19 AAW62569 139 5 6.4 873 19 AAW62561 139 5 6.4 881 17 AAR84091 139 5 6.4 881 17 AAR84091 139 5 6.4 881 17 AAR84091 139 5 6.3 869 18 AAW26501 139 5 6.3 869 18 AAW26501 139 5 6.3 869 18 AAW26501 139 5 6.3 869 22 AAG77856 139 5 6.2 1483 22 ABG16336 130 5 6.2 1483 22 ABG16336 130 5 6.2 1483 22 ABG16336 130 6.1 708 23 ABB75752 130 6.1 708 23 ABB75752 130 6.1 708 23 ABB75752	3 5	AAU84351	23	ω		126	42
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW3219 145.5 7.0 404 23 AAW37543 145.5 7.0 404 23 AAW37543 145.5 7.0 404 23 AAW37543 138 6.6 1496 20 AAW391030 138 6.6 1496 21 AAY770469 138 6.6 1498 22 AAB710469 138 6.5 1447 16 AAR68553 136 6.5 1447 20 AAY33498 136 6.5 1447 22 AAB5053 136 6.5 1447 22 AAB5053 137 6.4 467 17 AAR3498 138 6.4 475 17 AAR3498 138 6.4 475 17 AAR3498 138 6.4 475 17 AAR34087 138 6.4 863 19 AAW62575 138 6.4 871 17 AAR34087 138 6.4 871 17 AAR34092 138 6.4 871 17 AAR34092 138 6.4 873 19 AAW62568 138 6.4 873 17 AAR34092 138 6.4 8871 17 AAR34092 138 6.5 18 AAW26516	ָּבְּעָ קיני	ABB75752	23	8		128	41
145.5 7.0 404 23 AAB23219 Human re 145.5 7.0 404 23 AAW317543 Human re 145.5 7.0 404 23 AAW4077543 Human re 138 6.6 1496 20 AAW81030 Human RA 138 6.6 1498 22 AAB1030 138 6.6 1498 22 AAB1030 138 6.5 1447 16 AAR70469 Human pe 138 6.5 1447 22 AAB50593 Human pe 136 6.5 1447 22 AAB50693 136 6.5 1447 22 AAB50693 137 6.4 467 19 AAW62569 138 6.4 475 17 AAR94982 Human pe 138 6.4 467 19 AAW62569 138 6.4 867 19 AAW62569 138 6.4 867 19 AAW62569 138 6.4 871 17 AAR84087 Mouse ri 138 6.4 873 17 AAR84087 138 6.4 873 17 AAR84087 138 6.4 873 19 AAW62568 138 6.4 873 19 AAW62568 138 6.4 873 19 AAW62573 Mouse ri 138 6.4 881 19 AAR84091 138 6.3 869 18 AAW26611 139 6.3 869 18 AAW26611 131 5 6.3 869 18 AAW26611 131 5 6.3 869 22 AAG77856 131 5 6.3 869 22 AAG77858 131 5 6.3 869 22 AAG77858 131 5 6.3 869 22 AAG77858 131 5 6.3 869 22 AAG77859 138 6.1 594 23 ABB75753 Human p	7737	AAU29315	22			128	40
145.5 7.0 404 23 AAE23219 Human r 145.5 7.0 404 23 AAM48745 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAY70469 138 6.6 1498 22 AAB11897 136 6.5 1447 16 AAR68553 136 6.5 1447 22 AAB51693 136 6.5 1447 22 AAB51693 136 6.5 1447 22 AAB51693 137 6.4 467 19 AAW62559 138 6.4 475 17 AAR94982 138.5 6.4 467 19 AAW62559 138.5 6.4 863 19 AAW62559 138.5 6.4 863 19 AAW62569 138.5 6.4 867 17 AAR84087 138.5 6.4 871 17 AAR84087 138.5 6.4 871 17 AAR84087 138.5 6.4 871 17 AAR84087 138.5 6.4 873 17 AAR84087 138.5 6.4 873 17 AAR84087 138.5 6.4 873 17 AAR84092 138.5 6.4 873 17 AAR84092 138.5 6.4 881 17 AAR84091 138.5 6.4 881 17 AAR84091 138.5 6.4 881 17 AAR84091 138.5 6.3 869 18 AAW26506 138.5 6.3 869 18 AAW26506 131.5 6.3 869 18 AAW26506 131.5 6.3 869 22 AAG77856 131.5 6.3 869 22 AAG77856 131.5 6.2 1483 22 ABG16336 110.5 6.2 1483 22 ABG16336 110.5 6.2 1483 23 ABB15751 110.5 6.2 1483 23 ABB15751 110.5 6.2 1483 23 ABB157551	ייכ	ABB75753	23			128	9
145.5 7.0 404 23 AAE23219 Human r 145.5 7.0 404 23 AAM277543 Human r 145.5 7.0 404 23 AAM48745 138 6.6 1496 20 AAW81030 Human r 138 6.6 1498 21 AAY70469 Human r 138 6.5 1447 16 AAR68553 Human r 136 6.5 1447 22 AAB11587 Human r 136 6.5 1447 22 AAB33498 Human r 137 6.4 467 12 AAR33498 Human r 138 6.5 1447 22 AAR33498 Human r 138 6.5 1447 22 AAR33498 Human r 138 6.5 1447 22 AAR80693 Human r 138 6.5 1447 22 AAR80693 Human r 138 6.4 475 17 AAR84087 Human r 138 6.4 863 19 AAW62569 A0user 138 6.4 871 17 AAR84087 Mouse r 138 6.4 871 17 AAR84087 Mouse r 138 6.4 873 19 AAW62568 NS&2 r 138 6.4 873 19 AAW62561 Human r 138 6.3 869 18 AAW26611 Human r 138 6.3 869 18 AAW26611 Human r 138 6.3 869 22 AAG77856 Mutant r 139 5 6.3 869 22 AAG77856 Antino 131 5 6.3 869 22 AAB61836 Protein 131 5 6.3 869 22 AAB61336 Novel		ABB75751	23			128	ω·
145.5 7.0 404 23 AAE23219 Human r 145.5 7.0 404 23 AAM77543 Human r 145.5 7.0 404 23 AAM77745 138 6.6 1496 21 AAW81030 Human r 138 6.6 1498 22 AAB11587 Deletec 136 6.5 1447 22 AAB51587 Deletec 136 6.5 1447 22 AAB50693 Human r 136 6.5 1728 12 AAR13144 Altern 136 6.5 1728 12 AAR3498 Human r 137 6.4 467 19 AAW62575 AR2569 AR2569 138.5 6.4 467 19 AAW62569 Human r 138.5 6.4 467 19 AAW62569 AR2569 AR2569 138.5 6.4 867 19 AAW62569 AR2569 AR2569 138.5 6.4 867 19 AAW62568 AR2569 AR2		ABG16336	22			130.5	7
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAM237349 145.5 7.0 404 23 AAM48745 145.5 7.0 404 23 AAM48745 138 6.6 1496 20 AAM81030 138 6.6 1496 21 AAX70469 138 6.6 1498 22 ABB11587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAX33498 136 6.5 1447 20 AAX33498 136 6.5 1447 20 AAX33498 137 6.5 1447 20 AAX33498 138 6.6 1498 22 AAB50693 139.5 6.4 467 19 AAM625693 139.5 6.4 467 19 AAM62569 139.5 6.4 863 19 AAM62569 139.5 6.4 863 19 AAM62569 139.5 6.4 871 17 AAR84087 139.5 6.4 871 17 AAR84087 139.5 6.4 871 17 AAR84087 139.5 6.4 873 17 AAR84087 139.5 6.4 873 17 AAR84092 139.5 6.4 881 17 AAR84091 139.5 6.4 881 17 AAR84091 139.5 6.4 881 17 AAR84091 139.5 6.3 869 18 AAW26506 139.5 6.3 869 18 AAW26506 139.5 6.3 869 18 AAW26506 139.5 6.3 869 22 AAG77856 139.5 6.3 869 22 AAG77856 139.5 6.3 869 22 AAG77856		AAB68421	22			131.5	3
145.5 7.0 404 23 AAE23219 Human re 145.5 7.0 404 23 AAW377543 Human re 138 6.6 1496 20 AAW31030 Human RJ 138 6.6 1496 21 AAY770469 138 6.6 1498 22 AABH1030 136 6.5 1447 16 AAR60553 136 6.5 1447 20 AAY33498 Human re 137 138 6.5 1447 22 AAB50593 Human pe 138 6.5 1447 20 AAY33498 138 6.5 1447 21 AAR60553 138 6.5 1447 22 AAB5093 139.5 6.4 467 17 AAR62575 139.5 6.4 867 19 AAW62569 139.5 6.4 867 19 AAW62569 139.5 6.4 871 17 AAR84087 139.5 6.4 871 17 AAR84087 139.5 6.4 873 17 AAR84087 139.5 6.4 881 19 AAW62569 139.5 6.4 881 19 AAW62569 139.5 6.4 881 19 AAW62561 139.5 6.3 869 18 AAW26611 139.5 6.3 869 18 AAW26506	1	AAG77856	22			131.5	51
145.5 7.0 404 23 AAE23219 Human re 145.5 7.0 404 23 AAW377543 Human re 145.5 7.0 404 23 AAW377543 Human re 138 6.6 1496 20 AAW81030 Human Re 138 6.6 1498 22 AAB70469 Human pe 138 6.5 1447 16 AAR68553 Human pe 136 6.5 1447 20 AAX33498 Human pe 136 6.5 1447 20 AAX33498 Human pe 136 6.5 1728 12 AAB50593 Human pe 137 6.4 467 19 AAW62575 Human pe 138.5 6.4 475 17 AAR94982 ALTERNA 138.5 6.4 863 19 AAW62569 Mouse re 138.5 6.4 867 19 AAW62568 Next certain 138.5 6.4 871 19 AAW62568 Next certain 138.5 6.4 871 19 AAW62568 Next certain 138.5 6.4 873 17 AAR84092 ALTERNA 138.5 6.4 8871 19 AAW62573 Next certain 138.5 6.4 8881 17 AAR84091 Next certain 138.5 6.4 881 19 AAW62570 Next certain 138.5 6.3 869 18 AAW36506 Muman mouse Next certain 138.5 6.3 869 18 AAW36506 Muma	3	AAG77858	22			131.5	4
145.5 7.0 404 23 AAE23219 Human re 145.5 7.0 404 23 AAW377543 Human re 145.5 7.0 404 23 AAW4977543 Human re 138 6.6 1496 20 AAW491030 Human re 138 6.6 1498 22 AABH1030 Human re 138 6.6 1498 22 AABH1030 Human pe 138 6.5 1447 16 AAR68553 Human pe 136 6.5 1447 20 AAX3398 Human pe 136 6.5 1447 20 AAX3398 Human pe 136 6.5 1728 12 AAB50693 Deleted 136 6.5 1728 12 AAR50693 Deleted 136 6.5 1728 12 AAR50693 Human pe 137 6.4 467 17 AAR62575 ARS 20 Ns 2 re 137 5 6.4 863 19 AAW62569 Nos 2 re 137 5 6.4 871 19 AAW62568 Ns 2 re 137 5 6.4 871 19 AAR64092 Ns 2 re 137 5 6.4 871 19 AAR64092 Ns 2 re 137 5 6.4 873 19 AAR64092 Ns 2 re 137 5 6.4 873 19 AAR64092 Ns 2 re 137 5 6.4 881 17 AAR84091 Ns 2 re 137 5 6.4 881 17 AAR84091 Human me 138 6.5 869 18 AAW26506 Million me 139 5 6.4 881 17 AAR84091 Human me 139 5 6.4 881 17 AAR84091 Human me 139 5 6.4 881 17 AAR84091 Human me 139 5 6.3 869 18 AAW26506 Million me 130 5 6.3 869 18 AAW26506 Million m		AAG / /85 /	22			131.5	ü
145.5 7.0 404 23 AAF23219 Human 1 145.5 7.0 404 23 AAU77543 Human 1 145.5 7.0 404 23 AAU477543 Human 1 138 6.6 1496 20 AAW81030 Human 1 138 6.6 1498 21 AAY70469 Human 1 138 6.5 1447 16 AAR8553 Human 1 136 6.5 1447 16 AAR8553 Human 1 136 6.5 1447 20 AAY33498 Human 1 136 6.5 1447 20 AAY33498 Human 1 136 6.5 1447 20 AAR3144 Delete 133.5 6.4 467 11 AAR85693 Delete 133.5 6.4 467 12 AAR3144 Altern 133.5 6.4 867 11 AAR862583 Mouse 133.5 6.4 867 11 AAR862583 Mouse 133.5 6.4 871 17 AAR864087 Mouse 133.5 6.4 871 17 AAR864092 Altern 133.5 6.4 873 17 AAR864091 133.5 6.4 873 17 AAR864091 133.5 6.4 873 17 AAR862572 Mouse 133.5 6.4 881 17 AAR862573 Nsk2 r 133.5 6.4 881 17 AAR862572 Mouse 133.5 6.4 881 17 AAR862572 Human 1 132.5 6.4 881 18 AAW625611 Human 1 132.5 6.3 869 18 AAW626611	+ ,	AAWZ6506	18			132.5	ະ
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAM277543 Human recept 145.5 7.0 404 23 AAM48745 145.5 7.0 404 23 AAM48745 138 6.6 1496 21 AAW81030 Human PS3 ti 138 6.6 1498 22 ABB11587 Human perox 136 6.5 1447 16 AAR68553 Human perox 136 6.5 1447 22 AAB501693 Human DCC pi 136 6.5 1447 22 AAB50693 Human DCC pi 137 6.5 1447 22 AAB50693 Human DCC pi 138 6.4 467 19 AAW62575 Human DCC pi 139.5 6.4 467 19 AAW62575 Alternative 133.5 6.4 863 19 AAW62583 NSC recept 133.5 6.4 867 19 AAW62583 NSC recept 133.5 6.4 871 17 AAR84091 133.5 6.4 871 17 AAR84091 133.5 6.4 873 17 AAR84091 133.5 6.4 873 17 AAR84091 133.5 6.4 881 17 AAR84092 133.5 6.4 881 17 AAR84091 133.5 6.4 881 17 AAR84092 133.5 6.4 881 17 AAR84092		AAW26611	18			132.5	2
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAM2319 145.5 7.0 404 23 AAM27543 Human recept 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAY70469 138 6.6 1498 22 ABB11587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAX33498 137 6.5 1447 20 AAX33498 138 6.5 1447 20 AAX33498 140 A	musci	AAW625/2	19			133.5	õ
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW27543 145.5 7.0 404 23 AAW37543 145.5 7.0 404 23 AAW381030 138 6.6 1496 20 AAW31030 138 6.6 1498 22 AAW71469 138 6.5 1447 16 AAR63553 136 6.5 1447 20 AAR3498 136 6.5 1447 22 AAR350693 136 6.5 1728 12 AAR31144 133.5 6.4 475 17 AAR34082 133.5 6.4 873 19 AAW62568 133.5 6.4 867 19 AAW62568 133.5 6.4 871 17 AAR84087 133.5 6.4 873 19 AAW62568	P Nek 2	AAR84U91	17			133.5	9
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW377543 145.5 7.0 404 23 AAW377543 145.5 7.0 404 23 AAW377543 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAW70469 138 6.6 1498 22 AAB31587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAX233498 136 6.5 1447 20 AAX233498 136 6.5 1728 12 AAB315693 136 6.5 1728 12 AAR31344 133.5 6.4 467 19 AAW62575 133.5 6.4 467 19 AAW62575 133.5 6.4 863 19 AAW62583 133.5 6.4 867 19 AAW62583 133.5 6.4 867 19 AAW62583 133.5 6.4 871 19 AAW62583 133.5 6.4 871 19 AAW62583 133.5 6.4 871 19 AAW62588		AAW62573	19			133.5	æ
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW177543 145.5 7.0 404 23 AAW177543 145.5 7.0 404 23 AAW177543 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAW710469 138 6.6 1498 22 AAB11587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAW33498 136 6.5 1447 20 AAW33498 136 6.5 1447 20 AAW33498 136 6.5 1728 12 AAR13144 137 6.5 1728 12 AAR13144 138 6.5 1728 12 AAR13144 138 6.5 1728 12 AAR362575 138 6.4 467 19 AAW62575 138 6.4 467 19 AAW62569 138 6.4 863 19 AAW62569	NSAL TOCEPOOL	AAR84092				133.5	7
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW27543 145.5 7.0 404 23 AAW37543 145.5 7.0 404 23 AAW37545 138 6.6 1496 20 AAW31030 138 6.6 1496 21 AAY70469 138 6.5 1447 16 AAR63553 136 6.5 1447 16 AAR63553 136 6.5 1447 22 AAB51693 136 6.5 1447 22 AAB50693 136 6.5 1728 12 AAR31144 133.5 6.4 477 17 AAR84087 133.5 6.4 867 19 AAW62569	. "	AAW62568			6,4	133.5	6
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAU77545 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAV70469 138 6.6 1498 22 AAB11587 138 6.5 1447 16 AAR68553 136 6.5 1447 20 AAV33498 136 6.5 1447 20 AAV33498 136 6.5 1447 22 AAB30693 136 6.5 1447 22 AAB30593 136 6.5 1728 12 AAR3144 133.5 6.4 467 19 AAW62575 133.5 6.4 863 19 AAW62583 133.5 6.4 863 19 AAW62583	′⊢	AAR84087			6.4	133.5	Ji i
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW177543 145.5 7.0 404 23 AAW177543 145.5 7.0 404 23 AAW177543 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAW70469 138 6.6 1498 22 AAB11587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAW33498 136 6.5 1447 20 AAW33498 136 6.5 1447 20 AAW33498 136 6.5 1728 12 AAB50593 137.5 6.4 467 19 AAW62575 133.5 6.4 475 17 AAR94982 133.5 6.4 475 17 AAR94982 133.5 6.4 863 19 AAW62569	ι"	AAW62583			6.4	133.5	4
145.5 7.0 404 23 AAR33219 145.5 7.0 404 23 AAW77543 145.5 7.0 404 23 AAW877543 145.5 7.0 404 23 AAW881030 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAY70469 138 6.6 1498 22 AAB81L587 136 6.5 1447 16 AAR68553 136 6.5 1447 20 AAR3498 136 6.5 1447 22 AAR515693 136 6.5 1447 22 AAR515144 133.5 6.4 475 17 AAR94582	Monso recento	AAW62569			6.4	133.5	ا ن
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAU77545 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAV70469 138 6.6 1498 22 ABB11587 138 6.5 1447 16 AAR68553 136 6.5 1447 20 AAV33498 136 6.5 1447 22 AAB50693 136 6.5 1447 22 AAB50693 136 6.5 1728 12 AAR33444 133.5 6.4 467 19 AAW62575	NSKZ extracer	AAR94982			6.4	133.5	N I
145.5 7.0 404 23 AAR23219 145.5 7.0 404 23 AAW77543 145.5 7.0 404 23 AAW77543 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAY70469 138 6.6 1498 22 ABB11587 138 6.5 1447 16 AAR68553 136 6.5 1447 20 AAY33498 136 6.5 1447 22 AAB50693 136 6.5 1447 22 AAB50693	Arternactvery	AAW62575			6. 4	133	, د
145.5 7.0 404 23 AAE23219 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAU77543 145.5 7.0 404 23 AAW48745 138 6.6 1496 20 AAW81030 138 6.6 1496 21 AAY70469 138 6.6 1498 22 ABB11587 138 6.5 1447 20 AAV33498 136 6.5 1447 22 AAB50693	A THE CONTRACT TO CO.	AAR13144			o. 5	136	۰ د
145.5 7.0 404 23 AARE23219 Human rec 145.5 7.0 404 23 AAM77543 Human RAG 145.5 7.0 404 23 AAM78745 Human RAG 138 6.6 1496 23 AAM81030 Human RAG 138 6.6 1496 21 AAY70469 Human psi 138 6.6 1498 22 AAB11587 Human psi 138 6.5 1448 12 AAR68553 Human per 136 6.5 1447 16 AAR68553 Deleted I	Human one to	AAB50693	22		ი	136	ه م
145.5 7.0 404 23 AAE23219 Human recep 145.5 7.0 404 23 AAW77543 Human recep 145.5 7.0 404 23 AAW8745 Human RAGE 138 6.6 1496 20 AAW81030 Human p53 t 138 6.6 1496 21 AAY70469 Human p53 t 138 6.6 1498 22 ABB11587 Human perox 138 6.6 1498 22 ABB1587 Human perox 136 6.5 1447 16 AAR68553 Human perox		AAY33498	20		6.5	136	φ.
145.5 7.0 404 23 AAE23219 Human recept 145.5 7.0 404 23 AAU77543 Human recept 145.5 7.0 404 23 AAW48754 Human RAGE 145.5 7.0 404 23 AAW481030 Human RAGE 138 6.6 1496 20 AAW81030 Melanoma as 138 6.6 1496 21 AAY70469 Human p53 t 138 6.6 1498 22 ABB11587 Human perox	3 :	AAR68553	16		6.5	136	7
145.5 7.0 404 23 AAE23219 Human recep 145.5 7.0 404 23 AAU77543 Human recep 145.5 7.0 404 23 AAW48745 Human RAGE 145.5 7.0 404 23 AAW481030 Melanoma as 138 6.6 1496 20 AAW81030 Human p53 t	Hullan Peroxide	ABB11587	22		თ. თ	138	σ,
145.5 7.0 404 23 AAE23219 Human recep 145.5 7.0 404 23 AAU77543 Human recep 145.5 7.0 404 23 AAW8745 Human RAGE 145.5 7.0 404 23 AAW81030 Melanoma as		AAY70469	21		6.6	138	UI I
145.5 7.0 404 23 AAE23219 Human recep 145.5 7.0 404 23 AAU77543 Human recep 145.5 7.0 404 23 AAM48745 Human RAGE		AAW81030	20		6.6	138	4
145.5 7.0 404 23 AAE23219 Human recep	יו מ	AAM48745	23		7.0	5	ωı
145 5 7.0 404 23 AAE23219 Human	recep	AAU77543			7.0	5.	N F
		2321		04	7.0	л	_

ALIGNMENTS

AAU75541 standard; Protein; 386 AA

23-APR-2002 (first entry)

AAU75541;

Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetle; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder. Human B7-like protein, B7-L_h2. 28-JUN-2000; 28-NOV-2000; 03-JAN-2002 Homo sapiens. (AMGE-) AMGEN INC 28-JUN-2001; 2001WO-US20719 WO200200710-A2 2000US-214512P. 2000US-0729264.

```
cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L CC seminal vesicle hyperplasia in transgenic mice overexpressing B7-L CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC pathway can be manipulated to regulate cytotoxic T-lymphocyte response CC in allograft transplantation, graft versus host disease, T-cell CC diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid CC purpura and psoriasis, chronic inflammatory disease such as systemic CC are also useful for alleviating the symptoms associated with CC are also useful as immunosuppressive agents for bone marrow and organ CC are also useful for diagnosis and treatment of diseases involving and treatment of diseases involving abnormal cell constiteration, including arterioscies and vascular restenosis. CC are also useful for diagnosis and treatment of diseases involving abnormal cell constiteration, including arterioscies and vascular restenosis. CC shock syndrome or allosensitisation due to blood transfusions, and for cephropathies (e.g. glomerulonephritis), was useful for alleviation of toxic comphropathies (e.g. glomerulonephritis), various pneumopathies cC lymphoproliferative disorders such as multiple myeloma. The present xx
                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
241 PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                              241
                                                                                                        181
                                                                                                                                                 181
                                                                                                                                                                                           121
                                                                                                                                                                                                                121 GELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVS 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and delivery and endometriosis and delivery and endometriosis and delivery and endometriosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful for enhancing the immune response to tumours. (\hat{1}) plays a regrewth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                                                      61 RPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-130881/17
                                                                                                                                                                                                                                                                                                                                                  1 MVAGAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV 60
                                                                                                                                                                                                                                                                                                                                                                                           1 MVAGAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                     PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRRRGFRIQFQKKS 300
                                                                                   ILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSL 240
                                                                                                                                                                         GELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVS
                                                                                                                               ILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSL
                                                                                                                                                                                                                                                              RPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B7-like polypeptides, polynucleotides and their modulators, diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                          386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK13029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         386 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 2088; DB 23; 100.0%; Pred. No. 8.8e-165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 23; Length 386;
                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (I) plays a role in
                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     are
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

Ş 망 Ş Д Q

밁

```
XX PIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PA XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                             seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimune diseases. B7-L
                   molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
purpura and psoriasis, chronic inflammatory
                                                                                                                                                                                                                                                               proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a rol growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                          conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) an
                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide related disease, disorders of the polypeptide related disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for diagnosing, preventing and treating reproductive, immu proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New B7-like polypeptides, polynucleotides and their modulators,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ABK13028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W0200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endocrinopathy; lymphoproliferative disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human B7-like protein, B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU75540 standard; Protein; 382 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 PPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361 PPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301 EKEKTNKETETESGNENSGYNSDEOKTTDTASLPPKSCESSDPEQRNSSCGPPHORADOR 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQR 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sarmiento UM, Schultz HJ, Chute HT;
              diabetes, immune thrombocytopenic
                                                                                                                                                                                                                                                                                       (I) plays a role in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immune and
osis -
                                                                                                                                                                                                                                                                                                                                                                                                                           are
```

8888888888888888888888888

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SA
SA
PN XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restemosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment of allergy, asthma and hypersensitivity reactions, treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of human B7-L_h1.
                                                                                                              Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antillcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                             Human B7-like protein, B7-L_h3.
                                                                                                                                                                                                                                                                                                                                                                23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             AAU75542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU75542 standard; Protein; 386 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 189
                                               Homo sapiens.
                                                                                        endocrinopathy; lymphoproliferative disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13 GSGSGNEVIEGPONARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TSQRYDQGGNFTSEMIIHNVEDSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLASPEKVSNTTVV 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 8e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

δÃ B Qy

Matches 371; Query Match

Conservative

 Mismatches Score 2000; DB 23; Pred. No. 1.7e-157;

> Indels Length 386;

0

Gaps

Local Similarity

95.8%; 99.2%;

В

133 AENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192

γQ 밁 Qy

Š g

밁

S

```
28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The polypeptide, polynucleotide encoding it and antibody against () useful for treating B7-like polypeptide-related disease, disorders conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New B7-like polypeptides, polynucleotides and their modulators, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; ABK13030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer and cancers of haematopoletic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 13; Fig 3; 135pp; English.
                                       Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, rephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigold), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of human B7-L_h3.
                                                                                                                                                                                                                                                                    are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                      arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis) Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid autoimmune diseases such as systemic lupus erythematosus, rheumatoid
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention relates to an isolated B7-like (B7-L) polypeptide (I).
       386 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ŷ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
          The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polypucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
seminal vesicle hyperplasia in transgenic mice overexpressing
                                                                                                                                                                                       Claim 13; Fig 4; 135pp; English.
                                                                                                                                                                                                              New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                             N-PSDB; ABK13031.
                                                                                                                                                                                                                                                                                                                                             Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                               (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                              28-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human B7-like protein, B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU75543 standard; Protein; 377 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373 NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           373 NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                313 SGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253 TMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TMLLTPTCTLTIRCCCCRRRCCGCNCCCCCCCCCCRRKRGFRIQFQKKSEKEKINKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SGNENSGYNSDEQKTIDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                             2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                          Schultz HJ,
                                                                                                                                                                                                                                                                                                                                        Chute HT;
                                 (I) plays a role
                                                                                                                                  are
```

```
AC XXX DE XXX OS XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
88888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                        ABG28169
                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC polypeptide. Hence modulators of (I) are useful for the treatment of CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC pathway can be manipulated to regulate cytotoxic T-lymphocyte response CC in allograft transplantation, graft versus host diseases. B7-L collegendent B-cell mediated diseases and autoimmune diseases. B7-L cd diseases involving chronic immune cell dysfunction or to treat cutoimmune diseases such as systemic lupus erythematosus, rheumatoid CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC disease, hashimoto's thyroiditis and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ CC grave's disease, Hashimoto's thyroiditis and diabetes mallitus. They care also useful as immunosuppressive agents for bone marrow and organ CC useful for diagnosis and treatment of diseases involving abnormal cell contangulation, including arteriosclerosis and vascular restenosis. CC proliferation, including arteriosclerosis and vascular restenosis. CC shock syndrome or allosensitieston due to blood transfusions, and for cepanopathies (e.g. glomerulonephritis), skin disorders (pemphigus and cell cepture) and personal cell contended the contended transfusions, and for company and treatment of disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, cc lymphoproliferative disorders such as multiple myeloma. The present xx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                          ABG28169;
                                                                                                                                                                                                                                              ABG28169 standard; Protein; 463
                                                                                                                                                                                                                                                                                                                                                              298
                                                                                                                                                                                                                                                                                                                                                                                      301 EKEKTNKETETESGNENSGYNSDEQKTTDTASLP 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 GELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 GELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVDEPSDLQSAVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 RPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MVAGAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MVAGAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKS
                                                                                                                                                                                                                                                                                                                                                   QTKKLRQKVEMKT---PATIQMNKRPQTPLLSLP 328
                                                                                                                                                                                                                                                                                                                                                                                                                             ILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RPMEPIITNDRFTSQRYDQGGNLTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               377 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75.5%; Score 1576; DB 23; 88.6%; Pred. No. 2.4e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
```

Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.

Novel human diagnostic protein #28160.

18-FEB-2002 (first entry)

Homo sapiens

```
멍
                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                   29
                                                                             밁
                                                                                                                 ρy
                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drmanac RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polypeptide (II) sequences. (I) is useful as hybridisation probes, and for chromosome polymerase chain reaction (PCR) primers, oligomers, and for chromosome polymerase and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy technique to restore normal activity of (II) or treat disease states involving to restore normal activity of (II) or treat disease states.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 20; SEQ ID No 58528; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAS92356.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                      109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYF 168
                                                                                181 VLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRR 240
                                                                                                                                                                121 VPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPG 180
                                                                                                                                                                                      169 VPEPSDLQSAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPG 228
241 KRG
                                        289 KRG 291
                                                                                                                                                                                                                                                61 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYF 120
                                                                                                                                                                                                                                                                                                                                                      49 MWALSDMVYLSVRPMEDIITNDRETSORYDQGGNFTSEMIIHNVEPSDSGNIRCSLONSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                      Loca.
                                                                                                                                                                                                                                                                                                                                1 MWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSR 60
                                                                                                                     VLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRR 288
                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           63.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1318; DB 22;
pred. No. 7.6e-101;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 463;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

RESULT 6

```
AAU75544
ID AAU7
cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L CC polypeptide. Hence modulators of (1) are useful for the treatment of CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC cancer and cancers of haematopoletic system. B7-L polypeptide cCC pathway can be manipulated to regulate cytotoxic T-lymphocyte response CC in allograft transplantation, graft versus host diseases, T-cell CC diseases involving chronic immune cytosymptoms associated with CC molecules are useful for alleviating the symptoms associated with CC diseases involving chronic immune cell dysfunction or to treat CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC inflammatory bowel disease (Crohn's disease and ulcerative colitis), CC Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They CC Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They can also useful as immunosuppressive agents for bone marrow and organ are also useful for diseases are useful for alleviation of toxic proliferation, including arteriosclerosis and vascular restenosis. CC Interestive of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, and for extreatment of allergy, asthma and hypersensitivity reactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antibacterial; virucide; tumour; cancer; antiastimmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU75544 standard; Protein; 370 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse B7-like protein, B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU75544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, conditions including reproductive disorders (e.g. infertility, and miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are extracellular domains and other regulators of tumours. (I) plays a role in useful for enhancing the immune response to tumours. (I) plays a role in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Welcher AA, Sarmiento UM, Schultz HJ, Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2001; 2001WO-US20719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Fig 5; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New B7-like polypeptides, polynucleotides and their modulators, to for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; ABK13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  useful for enhancing the immune response to tumours. (I) plays a regrowth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              88888888
                                                                                                                                                                                                                              Rat; B7-like protein; B7-L; antiinfertility; gynaecological; antilumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; heemostatic; antihyroid; antiulcer; antillergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 192;
            (AMGE-) AMGEN INC
                                         28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                         28-JUN-2001; 2001WO-US20719
                                                                                                                                  03-JAN-2002
                                                                                                                                                                   WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                 Rat B7-like protein, B7-1.
                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU75547;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU75547 standard; Protein; 631 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  352 PRVSFDIASPQKVRNVTLV 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               368 POASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        294 ETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELNKHQPGPATH 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       249 LLLILIIVLIIIFCCC-------CASRREKEESTYQNEIRKSANMRTNKADP 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     254 MLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRKRGFRIQFQ---KKSEKEKTNK--- 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201 CVAELKDLQASKSLTVNLTVVQPPPD------SIGEEGPALPTWAIILLAVAFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194 CVATWKSLKARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134 ENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81 YASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQVMGTLNIPSNNLIVT 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 SGSGNEVIEGPQNARVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRET 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETETESGNENSGYNSDEOKTIDTASLPPKSCESSDPEORNSSCGPEHQRADQRPPRPASH 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EGEPCNVTCYAVGWTSLPDISWELEVPVSHSSYNSFLEPGNFMRVLSVLDLTPLGNGTLT 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SORYDOGGNETSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVOVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFT 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       370 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                            lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.8%; Score 913.5; 50.7%; Pred. No. 1.9 tive 50; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.9e-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

```
ОĀ
                                                                                                              В
                                                                                                                                                     Qγ
                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L CC seminal vesicle hyperplasia in transgenic mice overexpressing B7-L CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC pathway can be manipulated to regulate cytotoxic T-lymphocyte response CC in allograft transplantation, graft versus host disease, T-cell cc diseases involving chronic immune cell dysfunction or to treat cutoimmune diseases such as systemic lupus erythematosus, Theumatoid CC autoimmune diseases such as systemic lupus erythematosus, Theumatoid CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC diseases involving chronic immune cell dysfunction or to treat cutoimmune diseases (Crohn's disease and ulcerative colitis), CC are also useful as immunosuppressive agents for bone marrow and organ cuseful for diagnosis and treatment of diseases involving abnormal cell CC purpura and special as immunosuppressive agents for bone marrow and organ cuseful for diagnosis and treatment of diseases involving abnormal cell CC proliferation, including arteriosclerosis and vascular restenosis. CC shock syndrome or allosensitisation due to blood transfusions, and for nephropathies (e.g. glomerulonephritis), 8kin disorders (pemphigus and cell furnombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and cc lymphoproliferative disorders such as multiple myeloma. The present xx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
309 SHSLSVRADFPTPNITEYGNPSADIKRITCFASGGFPKPRLSWLENGRELNSYNSFLEPG
                                                                                    249 QRYEGGSYVVKHLTTVEVMGTLNIPSNNLIVTEGEPCNVTCYAVGWTSLPDISWELEVPV
                                                                                                                              116 -----TVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISWELGLLV 161
                                                                 162 SHS----
                                                                                                                                                                           189 ELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQVYDIANNYSFSLLGLILSDRGTYTCVV 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                               129 KALLSCDYKFCSEEQSIHRIYWQKHDKMYLSVISGVPEVWPKYKNRTTYASYNSTDSFIS 188
                                                                                                                                                                                                                     86 EMIIHNVEPSDSGNIRCSLONSRLHGSAYL----- 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                      69 SGIVGQVSKSVRNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFE 128
                                                                                                                                                                                                                                                                                                                                                                                             14 SGSGNEVIEGPONARVLKGSOARFNCTVSOGWKLIMWALSDMVVLSVRPMEPIITNDRF- 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and prollferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 8; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27.4%; Score 572.5; DB; 27.8%; Pred. No. 7.1e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 113; Indels 267;
                                                                                                                                                                                                                                                                                                              DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chute HT;
                                            ------SYYFVPEPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 631;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

9

```
рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer;
reproductive disorder; graft versus host disease; autoimmune disease;
toxic shock syndrome; allergy; nephropathy; skin disorder;
endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiucer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU75545 standard; Protein; 270 AA.
The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse B7-like protein, B7-L_m2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     369
                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    174 DLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                          for diagnosing, preventing and treating reproductive, imm proliferative disorders, e.g. cancer and arterlosclerosis
                                                                                                                                                                                                                                                                                                                                                           Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     313
                                                                                                                                                                                      Claim 13; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                           New B7-like polypeptides, polynucleotides and their modulators, useful
                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SGNENSGYNSDEOKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQ 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ-KKSEKEKINK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LGLAGTMLL - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FNATYDHFIDCFIEYGDAHVSQNFTVVQPPPD-----SIGEEGPALPTWAIIL 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NEMRVLSVLDLTPLGNGTLTCVAELKDLQASKSLTVNLGINTTISQDPESELYTISSQLD 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LAVAFSLLLILIIVLIIIFTWVKPPEDPPDEKQTVPFAWAGPDAVKAIIIFFIAITVIAV 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----TVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVG 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SGKENYGYSSDECITVKFRRCFRRNEASRETNKNLYIGPVEAAAEQ 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IAAIAIIIFCCCCASR------REKEESTYQNEIRKSANMRTNKADPETKLK 582
                                                                                                                                                                                                                                                                                                                        2002-130881/17
                                                                                                                                                                                                                                                                                                    ABK13033.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                           Sarmiento UM,
                                                                                                                                                                                                                                               and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                               Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                               Chute HT;
                             plays a role in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                211
                                                                                                                         g
                                                                                                                                           are
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                            밁
XEXTXXX
                                                                                                                                                                                                                                                                        RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), inflammatory bowel disease (Crohn's disease and diabetes mellitus. They grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They grave's disease, Hashimoto's thyroiditis and diabetes mellitus are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arterlosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, and for dephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigold), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      testicular cancer and cancers of haematopoletic system. B7-L polypeptic pathway can be manipulated to regulate cytotoxic T-lymphocyte response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of polypeptide. Seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 molecules are useful for alleviating the symptoms associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in allograft transplantation, graft versus host disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                            Mouse B7-like protein, B7-L_m3
                                                                                        23-APR-2002
                                                                                                                                                                                                            AAU75546 standard; Protein; 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    254 MILTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSEKEKTNK---
                                                                                                                                                                                                                                                                                                                                                            252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            194 CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rocar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 193
                                                                                                                                                                                                                                                                                                                                                            PRVSFDIASPQKVRNVTLV
                                                                                                                                                                                                                                                                                                                                                                                                                  PQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELNKHQPGPATH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETETESGNENSGYNSDEOKTTDTASLPPKSCESSDPEORNSSCGPPHORADORPPRPASH 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LLLILIVLIIIFCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27.18; 34.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 566.5; DB 23; Pred. No. 7.7e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        --CASRREKEESTYQNEIRKSANMRTNKADP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.7e-39;
71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---DSIGEEGPALPTWAIILLAVAFS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels 135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      r-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125
```

<u>ن</u>

Matches

118;

Conservative

37;

Pred. No. 3.4e~32; 7: Mismatches 45;

Indels

176;

Gaps

6

31.4%;

Best Local Similarity

```
nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coellac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell disfunction or to treat
                                                                                                                                                                                       proliferation, including arteriosclerosis and vascular rescenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                             autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoritasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The polypeptide, polynucleotide encoding it and antibody against (i) a useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                        treatment of allergy, asthma and hypersensitivity reactions
                                                                                                                                                                                                                                                                                                are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to an isolated B7-like (B7-L) polypeptide (I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 13; Fig 7; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ABK13034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiucer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         endocrinopathy; lymphoproliferative disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002-130881/17
                                                                                                                                                                                                                                               for diagnosis and treatment of diseases involving abnormal cell eration, including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schultz HJ, Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ín
```

Query Match

23.2%;

Score 485;

DB 23;

Length 223

Sequence

223 AA;

```
8x 22222
                                                                                                                        DR PT PT PT XX
                                                                                                                                                                                                                                          PA
PI
XX
                                                                                                                                                                                                                                                                                                           PF
PR
XX
                                                                                                                                                                                                                                                                                                                                                                                                            XX
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB81925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
The present invention describes a material for extracorporeal circulation which is made from a water-insoluble carrier immobilized with a protein having the sequence shown here. The materials of the invention, including adsorbents, are for extracorporeal circulation, which are applicable in the selective elimination of diabetic complication factors from a body
                                                                                                                                 Material for extracorporeal circulation, applicable in selective elimination of diabetic complication factors such as carbonyl stress products caused by abnormally promoted carbonyl stress from excretory dysfunction in vascular lesions
                                                                                                   Claim 1; Page 31-32; 36pp; Japanese.
                                                                                                                                                                                                                                                          Shimizu S,
                                                                                                                                                                                                                         WPI; 2001-290314/30.
                                                                                                                                                                                                                                                                                          (TORA ) TORAY IND INC
                                                                                                                                                                                                                                                                                                                         08-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                       08-SEP-2000; 2000WO-JP06172
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Extracorporeal circulation; carbonyl stress product; receptor; diabetes; vascular lesion; excretory dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                            WO200118060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Extracorporeal circulation material receptor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB81925 standard; protein; 404 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     311 TESGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           208 SFDIASPQKVRNVTLV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         371 SFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    254 MILTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKINK---ETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194 CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81 YASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENEPCEVTCLPSHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFT
                                                                                                                                                                                                                                                       Kubota M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                        99JP-0254463
                                                                                                                                                                                                                                                     Akiyama H,
                                                                                                                                                                                                                                                       Usui M;
                                                                                                                                               from excretory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         - RTNKADPETK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
```

```
SSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fluid, and are therefore useful in treating vascular lesions like arteriosclerosis due to carbonyl stress products caused by abnormally promoted carbonyl stress from excretory dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                             Human receptor for advanced glycosylation end product (RAGE) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE23219 standard; Protein; 404 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 AYLTYOVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR 218
                                                                                                                                                                                                                                                                                                                                                                    Human; Receptor for advanced glycosylation end product; RAGE; cardiant; tissue growth; neointimal formation; blood vessel; restenosis; diabetes; myocardial infarction; angioplasty; peripheral vascular surgery; angina; transgenic animal; acute thrombotic stroke; venous thrombosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 EPITTNDRFTS-----ORYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    390 ------QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           268 CCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322 E-PGEEG
                                                                                                                                                                                                                13-OCT-2000; 2000US-0687528.
                                                                                                                                                                                                                                                                             18-APR-2002
                                                                                                                                                                                                                                                                                                            WO200230889-A2
                                          Inhibiting new tissue growth or neointimal formation in blood vessels of subject suffering from diabetes, stroke and preventing restenosis, comprises administering inhibitor of receptor for advance glycation end
                                                                                                                                                     Stern DM, Schmidt A,
                                                                                                                                                                                                                                            12-OCT-2001; 2001WO-US32036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                         N-PSDB; AAD36952
                                                                                                                                                                                   (UYCO ) UNIV COLUMBIA NEW YORK.
                               product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77;
                                                                                                                         2002-426260/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative 34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0%;
                                                                                                                                                          Marso S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----QRRGEERKAPENQEEEEERAELN------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----PTAGSVGGSGLGTLALALGILGGLGTAALLIGVI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 145.5; DB Pred. No. 0.001;
                                                                                                                                                            Topol E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 22; Length 404;
                                                                                                                                                             Lincoff AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94; Indels 123; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
```

Disclosure; Page 16; 43pp; English

14-AUG-2001; 2001WO-US25416

21-FEB-2002 WO200214519-A1

```
The invention relates to a method for inhibiting new tissue growth or continual formation in blood vessels in a subject that has experienced control of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
AAU77543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                      Receptor for advanced glycation end product; RAGE; receptor; amyloid beta peptide; blood-brain barrier; neurovascular stress; cerebral vasoconstriction suppressor; cerebral blood flow enhancer; cerebral amyloid angiopathy; transgenic animal; amyloid beta precursor; Alzheimer's disease; Down's syndrome; head trauma; stroke; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU77543 standard; Protein; 404 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        113 AYLTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     219
                                                                                                                                                                                                                                                                                                                                                                                                                                    Human receptor for advanced glycosylation end product (RAGE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU77543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                271 WMKD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322 E-PGEEG------PTAGSYGGSGLGTLALALGILGGLGTAALLIGVI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT------PTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      155 WELGILVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    390 -----QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 CCRRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64 EPIITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ALRTAPIOPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0%; Score 145.5; DB
23.5%; Pred. No. 0.001;
1tive 34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----QRRGEERKAPENQEEEEERAELN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94; Indels 123; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15;
```

```
RESULT 13
AAM48745
                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention describes a method of ameliorating neurovascular stress, and decreasing cerebral vasoconstriction in subject suffering from the composition of acute cerebral amyloid angiopathy, comprising administering an inhibitor (I) of receptor for advanced glycation end product (RAGE). CC (I) inhibits transcytosis of amyloid beta peptides across blood-brain cerebral blood flow. (I) is useful for treating amyloid angiopathy in a crebral blood flow. (I) is useful for treating amyloid angiopathy in a cerebral (preferably, transgenic mouse overexpressing mutant human amyloid corenbral amyloid angiopathy, preferably, Alzheimer's disease, and for cerebral amyloid angiopathy, preferably, Alzheimer's disease, and for cerebral amyloid angiopathy, preferably, Alzheimer's disease, and for conserved the neurovascular stress is caused by Alzheimer's comprising cerebral amyloid angiopathy conserved conserved amino acid sequence of human receptor for advanced glycation end conserved c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                    02-APR-2002 (first entry)
Human RAGE protein SEQ ID NO 1.
                                                                                                                            AAM48745;
                                                                                                                                                                 AAM48745 standard; protein; 404 AA.
                                                                                                                                                                                                                                                                                                                      390 ------QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                           326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268 CCRRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQ 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         322 E-PGEEG------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVI 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCC 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         271 WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155 WELGILVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        219 ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                113 AYLTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 16; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amellorating neurovascular stress and decreasing cerebral vasoconstriction in subject suffering from chronic/acute cerebral amyloid angiopathy, by administering inhibitor of receptor for advanced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64 EPIITNDRFTS-----QRYDQGGNET--SEMIIHNVEPSDSGNIR----CSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-AUG-2000; 2000US-0638648.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2002-257610/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schmidt AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0%; Score 145.5; DB 23; Leny...
23.5%; Pred. No. 0.001;
Mismatches 94; Indels 123; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yan SD,
                                                                                                                                                                                                                                                                                                                                                                                                                            QRRGEERKAPENQEEEEERAELN------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zlokovic B;
```

```
DЪ
                                                                                                                      Q
                                                                                                                                                              В
                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to detecting receptor for advanced glycated endproducts (RAGE) modulators comprises determining the amount of RAGE protein or its fragment bound to the pre-adsorbed ligand by measuring the amount of anti-RAGE antibody bound to the solid surface. The method is modulate RAGE in the compounds are useful for rapid, high-throughput identification of compounds that and symptoms of diabetic late complications, amyloidoses, Alzheimer's disease, cancer, inflammation, kidney failure, systemic lupus nephritis or inflammatory lupus nephritis, erectile dysfunction and
          390 ---
                                326 KTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                 268 CCRRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQ 325
                                                                                                                                          322 E-PGEEG------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVI 361
                                                                                                                                                                               215 RCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT------PTCTLTIRCC 267
                                                                                                                                                                                                                                                        155 WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVI 214
                                                                                                                                                                                                                   271 WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISII 321
                                                                                                                                                                                                                                                                                               219 ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH 270
                                                                                                                                                                                                                                                                                                                                    113 AYLTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTWLPDIS 154
                                                                                                                                                                                                                                                                                                                                                                        162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHR 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Fig 2; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Detecting a receptor for advanced glycated endproducts (RAGE) modulators, for treating e.g., cancer, diabetes or inflammation, comprises measuring the amount of bound anti-RAGE antibody -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-114372/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TRAN-) TRANS TECH PHARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAY-2000; 2000US-207342P.
05-MAR-2001; 2001US-0799152.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; RAGE; receptor for advanced glycated endproduct; receptor; antidiabetic; neuroprotective; cytostatic; antiinflammatory; vasotropic; nephrotropic; dermatological; antiarteriosclerotic; nootropic; diabetes; Alzheimer's disease; cancer; inflammation; kidney failure;
                                                                                                                                                                                                                                                                                                                                                                                                           64 EPIITNDRETS-----ORYDQGGNET---SEMIIHNVEPSDSGNIR----CSLONSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2001; 2001WO-US17447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     systemic lupus; nephritis; erectile dysfunction; atheroscierosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W0200192892-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity les 77; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
-QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.0%; Score 145.5; DB 23.5%; Pred. No. 0.001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        34; Mismatches
                                                                 -QRRGEERKAPENQEEEEERAELN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 23; Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  94; Indels 123; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    15;
```

```
AAW81030
δõ
                                    멍
                                                                      Ş
                                                                                                                밁
                                                                                                                                                   δõ
                                                                                                                                                                                             Matches
                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW81030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW81030 standard; Protein; 1496 AA
                                                                                                                                                                                                                                                                                                                                                          melanoma, lung carrinoma and rhabdomyosarcoma cells, foetal brain, foetal heart and human placenta. The invention also provides T cell epitopes (see AAW80131-54) from McS0, including cytotoxic and helper T cell epitopes, antibodies that specifically bind to McS0 or an McS0 T cell epitopes, recombinant vectors, and antigen presenting cells. Methods are provided for identifying an McS0 melanoma associated antigen in an individual and for identifying an immune response against an McS0 melanoma associated antigen, as well as methods of stimulating T lymphocytes that are reactive against cancer cells expressing McS0 and for treating an individual having cancer cells that express McS0. The products and methods can be used for the defertion. Treatment and prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MG50; melanoma gene-50; melanoma associated antigen; human;
T_cell epitope; cancer; lung cancer; rhabdomyosarcoma; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This polypeptide comprises a portion of a new human melanoma associated antigen, designated MG50. The amino acid sequence was deduced from a cDNA clone (see AAV99922) isolated from melanoma cell line MSM M-1 cDNA by subtractive hybridisation. The 5' region MG50 cDNA was not obtained. MG50 mRNA has been detected in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Melanoma associated antigen MG50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New MG50 melanoma associated antigen fragments - used to develop products for the detection, treatment and prevention of MG50-expressing cancers, e.g. melanoma, lung cancer or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9855133-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           therapy; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 45-49; 79pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAV99922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-080820/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deans RJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (REGC ) UNIV CALIFORNIA.
(UYSC-) UNIV SOUTHERN CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rhabdomyosarcoma
                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                can be used for the detection, treatment and prevention of MG50-expressing cancers, e.g. melanomas, lung cancer or
                                                                                                                                                                                                                                                                                                              rhabdomyosarcoma
115 LTVQVMGELFIPSVNLVVAENE----PCEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFV 169
                                      399 PLPVDPRVNITPS------GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAF 443
                                                                                                              339 VAGEVKTQEVTLRYFGSPARPTFVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRT 398
                                                                        57 VLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAY 114
                                                                                                                                                   2 VAGAMENRDPP----GSGSGNEVIEGPQNARVLKGSQARFNCTVS-QGWKLIMWALSDMV 56
                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kan-Mitchell J,
                                                                                                                                                                                                                                                                        1496 AA;
                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0870941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US11533.
                                                                                                                                                                                                               6.6%; Score 138; DB 20; Length 1496; 25.1%; Pred. No. 0.022;
                                                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minev BR,
                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mitchell MS;
                                                                                                                                                                                                 127; Indels
                                                                                                                                                                                                   68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        region
                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                     17;
```

```
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRG2; p53 target; human; modulate; cell proliferation; immunomodulatory; chromosome 2p24.3; cytostatic; gene therapy; tumour cell; inducer; diagnosis; therapeutic; proliferative disease; cell cycle arrest; cancer; treatment; apoptosis; knockout animal; cancer susceptibility; dPxn; hPxn;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY70469 standard; Protein; 1496 AA
            The present sequence is the protein encoded by PRG2 gene, that is upregulated in response to induction of p53 activity in human colon cancer EBI cells. This sequence is the human homologue (hPxn) of Drosophila peroxidasin gene dPxn, that is expressed in heart, placenta, spleen, ovary and intestines. PRG2 is involved in p53-mediated growth suppression pathways and plays a role in redox regulation. It is a suppression pathways and plays a role in redox regulation. It is a haem-peroxidase that increases the intracellular content of reactive oxygen species (ROS). They are potential targets of p53 regulatory activity and are useful for modulation of cellular proliferation. PRG2 agene is localised to human chromosome 2p24.3. The PRG target molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human p53 target molecule, PRG2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY70469
                                                                                                                                                                                                                                            New p53-inducible isolated nucleic acid molecule including open reading frame encoding human homolog of Drosophila melanogaster peroxidasin, useful e.g. in detection and treatment of cancer \dot{}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200012526-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peroxidasin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      221 ---GGGINIPGVLSSLPSLGFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          170 PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV------IRCPQDT- 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAZ51671
                                                                                                                                                                                                                                                                                                                                                                                                                                          28-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-MAR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    608 RYECVARNTIG 618
                                                                                                                                                                                                             Disclosure; Page 71-74; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                      Horikoshi N,
                                                                                                                                                                                                                                                                                                                                                                                                       (UYPR-) UNIV PRINCETON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VEVGANVQLP-----CSSQGEPEPAITWNKDGVQVTESGKFHISPEGFLTINDVGPADAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LSSGTLR--ISGVALHDQ--GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RCCCCRRRCCG 275
                                                                                                                                                                                                                                                                                                                                       2000-246724/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        redox-regulation; reactive oxygen species; ROS.
                                                                                                                                                                                                                                                                                                                                                                      Shenk T;
                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0098251.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US19551.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= Mature_human_PRG2_protein
/note= "Homologue of Drosophila peroxidasin, dPxn"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30..1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 264
```

have cytostatic and immunomodulatory activity. PRG polynucleotides,

```
Search completed: April 28, 2003, 18:14:31 Job time: 41.4662 secs
                                                                                                                                               Q
                                                                                                                                                                                                   망
                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 6.6%; Score 138; DB 21; Length 1496; Best Local Similarity 25.1%; Pred. No. 0.022; Matches 78; Conservative 38; Mismatches 127; Indels 68; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteins and antibodies are useful as diagnostic and therapeutic agents for detection and treatment of cancer and other proliferative diseases. The gene/cDNA may be used for gene therapy, to restore a gene function downstream of p53, that cannot be activated in the p53-deficient tumour cell. Antibodies can be used as inducers of cell cycle arrest and/or apoptosis. The DNA sequences can be used to generate 'knockout' animals as a model of cancer susceptibility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                 608 RYECVARNTIG 618
                                                                                                                                                                                   553 VEVGANVQLP-----CSSQGEPEPAITWNKDGVQVTESGKFHISPEGFLTINDVGPADAG 607
                                                                                                                                                                                                                                                                                499 LSSGTLR--ISGVALHDQ--GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTT 552
                                                                                                                                                                                                                                                                                                                                                                            444 IIVQALPQFTVTPQDRVVIEGQTVDFQCEAKGNPP-----PVIAWTKGGSQLSVDRRHLV 498
                                                                                                                                               265 RCCCCRRRCCG 275
                                                                                                                                                                                                               221 ---GGGINIPGVLSSLPSLGFSLP--TWGKVGLGL--AGTMLLTPTCTLTI------ 264
                                                                                                                                                                                                                                                                                                                              170 PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV------IRCPQDT- 220
                                                                                                                                                                                                                                                                                                                                                                                                                          115 LTVQVMGELFIPSVNLVVAENE----PCEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFV 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399 PLPVDPRVNITPS-----GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAF 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       339 VAGEVKTQEVTLRYFGSPARPTFVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRT 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       57 VLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 VAGAMENRDPP----GSGSGNEVIEGPQNARVLKGSQARFNCTVS-QGWKLIMWALSDMV 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17;
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0 Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-729-264-6
2077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              April 28, 2003, 16:24:32; Search time 37.1283 Seconds (without alignments) 2142.147 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MERHLLTVPEAVGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                   SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                            sp_organelle:*
sp_phage:*
sp_plant:*
sp_rodent:*
sp_virus:*
              sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                                                                                                                sp_mhc:*
                                                                                                                                                                                                   sp_human:*
sp_invertebrate:*
                                                                                                                                                                                     sp_mammal:*
sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                                                                                                              671580
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match Length DB	ength	BO	ID	Description
1	1694	81.6	315	4.	Q9NSI5	homo
N	579.5	27.9	270	11	Q9D8G2	
ω	142.5	6.9	344	13	Q9DF61	_
4	141	6.8	168	11	Q9D9I2	
5	137.5	6.6	315	13	Q9DGI5	Q9dgi5 gallus gall
6	137.5	6.6	344	11	Q99PJ0	Q99pj0 mus musculu
7	137.5	6.6	344	œ	093242	093242 gallus gall
œ	136.5	6.6	173	11	Q9D4K2	Q9d4k2 mus muscuru
9	135	б. 5	1496	4	Q92626	Q92626 nomo sapien
10	133.5	6.4	344	4	Q9P121	Q9p121 nomo sapien
11	133	6.4	1427	13	Q91562	
12	131	6.3	697	11	Q9DBP0	Q9dbpo mus muscuru
13	131	6.3	697	11	Q9Z290	CSSC mus muscuru
14	129.5	6.2	164	თ	Q22048	Q22048 caenornabul
15	129	6.2	6632	σı	001761	OUI/61 caenormabur
16	128	6.2	1445	11	Q63155	Q63155 rattus norv

114 5.5 1395 114 5.5 2673 113.5 5.5 196	114 5.5 1395 5	114 5.5 569 114 5.5 868	114 5.5 46 4 9	114.5 5.5 152 5	5.6 2221	116 5.6 275 11	116.5 5.6 345 5 C	117.5 5.7 5636 4	117 5 5 7 390 4	5.8 975	120 5.8 968 5	120 5.8 959 5 0	120 5.8 695 11	122.5 5.9 4370 4 C	122.5 5.9 455 4	122.5 5.9 188 5	125.5 6.0 166 5	126 6.1 6620 4	127 6.1 313 13	127.5 6.1 881 11	127.5 6.1 871 11	127.5 6.1 869 4	127.5 6.1 197	
		Q62838 rattus norv		caen	Q9hcl6 homo sapien	۷.	ros		homo	017362 caenorhabdi		OS-146 drosophila	Q9jj09 rattus norv	Q9h3v5 nomo sapien	homo	caen		Q96aa2 nomo sapien	057596 gallus gall	Q61988 mus muscuru	ยนร	OIIIO	Q17641 caenorhabdi	

ALIGNMENTS

KRP RRA RRA RRA RRA RRA RRA RRA RRA RRA R	POOK NO.
SEQUENCE FROM N.A. SEQUENCE FROM N.A. SEQUENCE FROM N.A. TOYODA A., Ishii K., Totoki Y., Choi D.K., Soeda E., Ohki M., Toyoda A., Ishii K., Totoki Y., Choi D.K., Soeda E., Ohki M., Toyoda A., Ishii K., Totoki Y., Blechschmidt K., Polley A., Takagi T., Sakaki Y., Taudien S., Blechschmidt K., Polley A., Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D., Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D., Menzel U., Delabar J., Kumpf K., Lehmann R., Patterson D., Reschthal A., Kudoh J., Shibuya K., Kawasaki K., Asakawa S., Shintani A., Sasaki T., Nagamine K., Mitsuyama S., Antonarakis S.E., Minoshima S., Shimizu N., Nordsiek G., Hornischer K., Brandt P., Scharfe M., Schoen O., Desario A., Reichelt J., Kauer G., Bloecker H., Ramser J., Beck A., Klages S., Hennig S., Riesselmann L., Dagand E., Wehrmeyer S., Borzym K., Gardiner K., Nizetic D., Francis F., Lehrach H., Reinhardt R., Yaspo M.L.; Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases. EMBL, AL163280; CAB90447.1; InterPro; IPR003599; Ig. InterPro; IPR003599; Ig. InterPro; IPR003599; Ig. InterPro; IPR00306; Ig_MHC. Pfam; PF00047; ig; 2. SMART; SM00409; IG; 2. SMART; SM00409; IG; 2. SMART; SM00409; IG; 2. NON_TER 315 NON_TER 315	ILT 1 (29NSI5 PRELIMINARY; PRT; 315 AA. (29NSI5; O1-OCT-2000 (TrEMBLrel. 15, Created) (01-OCT-2001 (TrEMBLrel. 15, Last sequence update) (01-DEC-2001 (TrEMBLrel. 19, Last annotation update) (01-DEC-2001 (Fragment). (16SF5 protein (Fragment). (16SF5. (10SF5. (10Man). (10Ma

Length 315;

5

```
RESULT OPERATE AND A CONTROL OF THE PROPERTY O
                                                                                                                                                                                                                                                                                                              RA Rawal J. Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,
RA Racawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashina J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Hynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γÇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
              Submitted (MAR-2001) to the EMBL/GenBank/DDBJ databases EMBL; AK008060; BAB25436.1; EMBL; BC004806; AAH04806.1; ...
                                                                                                                                     Strausberg R.,
                                                                                                                                                                                                                                          Nature 409:685-690(2001).
                                                                                                                                                                                                                                                               "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=C57BL/6J; TISSUE=SMALL INTESTINE; MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O9D8G2;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9D8G2
                                                                                                                                                                         EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2010003D20Rik protein (RIKEN cDNA 2010003D20 gene).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              254 MILITPICTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFOKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 ENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
MGI:1919308; 2010003D20Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GNENSGYNSDEQKTT 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGESLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNENSGYNSDEQKTT 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLONSRLHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGSGNEVIEGPQNARVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1694; DB 4; Pred. No. 7.3e-144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
RESULT
Q9DF61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DR
DR
DR
SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                          MEDLINE-2049204; PubMed=11042360; Lodge A.P., Howard M.R., McNamee C.J., Moss D.J.; "Co-localisation, heterophilic interactions and regulated expression of IgLON family proteins in the chick nervous system."; Brain Res. Mol. Brain Res. 82:84-94(2000).

EMBL; AF292934; AAG01877.1; -.
Immunoglobulin domain.
SEQUENCE 344 AA; 37
                           SMART; SM00409; IG; 3.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
                                                                                     InterPro; IPR003599; Ig.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_MHC.
                                                                           InterPro; IPR003006; Pfam; PF00047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                   TISSUE-BRAIN
                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                         OBCAM alpha 1 isoform.
                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9DF61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9DF61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003599; Ig.
InterPro; IPR003006; Ig_MHG.
SMART; SM00409; IG_I; 1.
PROSITE; PS00290; IG_MHC; UNKNOWN_1.
SEQUENCE 270 AA; 29604 MW; A39C273DAA950DFE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243 KHQPGPATHPRVSFDIASPQKVRNVTLV 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         359 QRPPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185 NMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140 IILLAVAFSLLLILIIVLIIIFCCCC------CASRREKEESTYQNEIRKSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245 KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSE 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   185 TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72 PIITNNRFTYASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65 PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELF 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 LLTVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEKTNK---ETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
37531 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27.9%; Score 579.5; DB 1 34.3%; Pred. No. 6.3e-44;
                                                                                                                                                                                                                                                                                                                                                                                                 . 16, Created)
. 16, Last sequence. 19, Last annotation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46;
                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
37FE6051CBF0E7B4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                             344 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ------DSIGEEGPALPTWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 11; Length 270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71
```

```
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                딣
                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                         Qy
                                                                                                                                                                                                                                                                                                               RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kashi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninoi P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Mordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
RA Hayashizaki Y .
  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                          Matches
                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9D9I2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-TESTIS;
MEDLINE-21085660; PubMed-11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4931420D14RIK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9D9I2;
                                                                                                                                                                                                           Nature 409:685-690(2001).
EMBL; AK006892; BAB24782.1; -.
MGD; MGI:1913992; 4931420D14Rik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     176 GQGFVSEDEYLE----ITGITREQSGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKN 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 165 SYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 VH----LIVQVPPQIVNISSDITVNEGSSVTLMCLAFGRPE-----PTVTWR---HLSGK 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220 TGGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 16
                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                 Hayashizaki Y.; "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        79 NDKWSIDNRVVILSN---TKTQY-----SIKIHNVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59 ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL--- 58
                                            260 CTLTIRCCCCRRRCCGCNC-CCRCCFCCRKRGFR----IQFQKKSEKEKTNKETETESG 314
ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RLLFLVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCTVDDRVRRVAW-LNRSTILYAG 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGASVGQKGILQCEASAVPVAEFQ --- WFKEDTRLA 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72; Conservative
                                                                                               39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                         168 AA;
                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.9%; Score 142.5; DB 13; Length 344; 26.1%; Pred. No. 0.00014;
                                                                                                                                                                                       18931 MW;
                                                                                                                  6.8%; Score 141; DB 11; Length 168; 32.0%; Pred. No. 7.7e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35; Mismatches 110; Indels 59; Gaps
                                                                                                 20;
                                                                                                                                                                                              7A2BD279612A5E94 CRC64;
                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168
                                                                                                    49;
                                                                                                      Indels
                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15;
```

Q99PJ0

099РЛ0

Q99PJU; 01-JUN-2001 (TrEMBLrel. 17, Created)

PRELIMINARY;

PRT;

344 AA

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9DGI5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                밁
                                                                                                                                             Ω
                                                                                                                                                                               밁
                                                Вþ
                                                                              δÃ
                                                                                                                 B
RESULT 6
                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9DG15;
Q9DG15;
Q1-MAR-2001 (TrEMBLrel. 16,
01-MAR-2001 (TrEMBLrel. 19,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9DGI5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CEPU-SE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CEPU-Se alpha 1 isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR003006; Ig_MHC.
Pfam; PF00047; 1g; 3.
SMART; SM00409; IG; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=BRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          166 AS 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; AF292936; AAG01879.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "characterisation of CEPU-Se, a secreted isoform of the IgLON family protein CEPU-1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lodge A.P., McNamee C.J., Howard M.R., Reed J.E., Moss D.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        112 LTRSQLELIEPE--PTMALEPSEITVAFFSHKNANVSDP----EEVPPCLDSDPFPNGDL 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        315 NENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASFNL 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunoglobulin domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003599;
                                                                                                                                             166 YYFVPEDSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCDQDT 220
                                               232 GVPVGQKGILMCEASAVPSADFQ---WYK 257
                                                                                                                                                                                 127
                                                                                                                                                                                                                 108
                                                                                221 GGGINIPGVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                              54 DMYVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NS 107
                                                                                                                                                                                                                                                                                                               20 RLLELVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCSVDNRVTRVAWLNRSSILYAGN 79
                                                                                                                                                                                                                                                                                                                                            3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQ-----GW---KLIMWALS 53
                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                              DKWCLDPRVVLLANTKTQYSIQ------IHDVDVYDEGPYTCSVQTDNHPKTS 126
                                                                                                                                                                               RVH----LIVQVSPKITEISSDISINEGGNVSLTCIA---TGRPDPTITWR---HISPKA 176
                                                                                                                                                                                                             RLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSS 165
                                                                                                                 VGFISEDEYLE----ITGITREQSGEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SM00409; IG; 3.
SM00408; IGc2; 3.
SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                          h 6.6%; Score 137.5; DB 13; Length 315; Similarity 26.0%; Pred. No. 0.00036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (AUG-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                315 AA; 34606 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi;
veognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                   38; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     68C5D27F0DDC6FB2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence update)
                                                                                                                                                                                                                                                                                                                                                                                      104;
                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                        57;
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                        14;
```

```
RESULT 7
093242
ID 0932
AC 0932
DT 01-N
DT 01-D
DE CEPU
OS Gall
OC Arch
OC Gall
OX NCBI
RN [1]
RP SEQU
RA Kimu
RT "CEP
RT Acti
RT Spin
RF EMBI
DR Inte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DT
RN
RN
RN
RN
RN
RN
RN
RT
RT
DR
RT

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
Submitted (MAR-1998) to the EMBL; AB011810; BAA31514.1; InterPro; IPR003598; Ig_c2.
                                                                                      Kimura Y., Shirabe K., Fukushima M., Takeshita M., Tanaka H., "CEPU-1: an Immunoglobulin Superfamily Molecule, Has Cell Adhesion Activity and Shows Dynamic Expression Patterns in Chick Embryonic Spinal Cord.";
                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                 Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                              Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1998 (TrEMBLrel. 01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-1998 (TrEMBLrel. 01-NOV-1998 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        093242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00047; 19; 3.
SMART; SM00409; IG; 3.
SMART; SM00408; IGc2; 3.
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nervous system.";
Submitted (JUN-2000) to the
EMBL; AF282980; AAK00276.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENČE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR003599; Ig. InterPro; IPR003598; Ig. C2. InterPro; IPR003600; Ig. like. InterPro; IPR003006; Ig. MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse),
Eukaryota; Metazoa; Chordata; Craniata; Verțebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130 --LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR---HISPKAVGFVSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 AYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-ICR; TISSUE-BRAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2001 (TrEMBLrel. 17, 01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cloning and expression of mouse neurotrimin gene in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75 ---PYAGNDKWCLDPRVVLLGNTQTQYSIEIQNVDVYDEGPYTCSVQIDNHPKTSRVH--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVR 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTLQCEASAVPSAEFQ---WFK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EYLQ----IQGITREQSGEYECSAS-NDVAAPVVPRVKVTVNYPPYFSEAKGTGVPVGQK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGINIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PMEPIITNDRF-TSQRYDQGGNFTSE--MIIHNVEPSDSGNIRCSLQ-----NSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDNRVTRVAWLNRSTI---- 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344 AA; 37924 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                              Neognathae;
                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi;
Weognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.6%; Score 137.5;
26.0%; Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                     08,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36;
                                                      EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3ECC6D5EE6C5C17D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No. 0.0004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lee S.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     developing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
```

```
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Fesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Fesole G., Quackenbush J.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Bushin J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Gurchaw-Barries B. Yoshida K. Haseorawa V. Vanasii U. Wohterici C., Wilming L.,
RA Gurchaw-Barries B. Yoshida K. Haseorawa V. Vanasii U. Wohterici C., Wilming L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ДЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DR
DR
DR
SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001
01-JUN-2001
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003600; Ig_like.
InterPro; IPR003006; Ig_MHC.
Pfam; PF00047; Ig; 3:
SMART; SM00408; IGc2; 2.
SMART; SM00410; IG_like; 1.
Immunoglobulin domain;
SEQUENCE 344 AA; 37613 MW;
                      EMBL; AK016467; BAB30253.1; -. MGD; MGI:1913992; 4931420D14Rik.
                                        Nature 409:685-690(2001).
EMBL; AK016467; BAB30253.1; -
        SEQUENCE
                                                                                                                      Wynshaw Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE=TESTIS;
MEDLINE-21085860; PubMed=11217851;
                                                                           "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                             Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4931420D14RIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4931420D14Rik protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9D4K2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9D4K2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     177 VGFISEDEYLE----ITGITREQSGEYECSAS-NDVAAPVVQRVKVTVNYPPYISDAKST 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54 DMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NS 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 RLLFLVPAGVPVRSGDATFPKAMDNVTVRQGESATLRCSVDNRVTRVAWLNRSSILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQ-----GW----KLIMWALS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GVPVGQKGILMCEASAVPSADFQ---WYK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSS 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DKWCLDPRVVLLANTKTQYSIQ------IHDVDVYDEGPYTCSVQTDNHPKTS 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGINIPGVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RVH----LIVQVSPKITEISSDISINEGGNVSLTCIA---TGRPDPTITWR---HISPKA 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
      173 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 17, Created)
(TrEMBLrel. 17, Last sequence update)
(TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        344 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
      19581 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37613 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.6%; Score 137.5;
26.0%; Pred. No. 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ig_like.
Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
147B6F155AC29FDF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22CAA8F526A6B57E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches 104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .0004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14;
```

```
ACCOCK PROBLET REPORT OF THE PROBLEM OF THE PROBLEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
Q92626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                     InterPro; IPR00
Pfam; PF03098;
Pfam; PF00047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-97191544; PubMed-9039502;
Nagase T., Seki N., Ishikawa K., Ohira M., Kawarabayasi Y. Tanaka A., Kotani H., Miyajima N., Nomura N.;
Tranaka A., Kotani H., Miya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-BONE MARROW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MYELOBLAST KIAA0230 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q92626;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q92626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mitchell M.S., Kan-Mitchell J., Minev B., Edman C., Deans R.J. "Identification of a novel melanoma gene (MG50) - likely the II.-1 receptor antagonist - which encodes epitopes recognized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Assignment of a human melanoma associated gene MG50 (D2S448) chromosome 2p25.3 by fluorescence in situ hybridization.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Weiler S.R., Taylor S.M., Deans R.J., Kan-Mitchell J., Mitchell M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-95048383; PubMed-7959781;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      260 CTLTIRCCCCRRRCCGCNC-CCRCCFCCRKRGFRIQFQKKSEKEKTNKETETESGNENS 318
                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=MELANOMA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomics 22:243-244(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Irent J.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-MELANOMA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            166 PNGDLAS 172
                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55 CSLSRSCCCCRCRCC-CYCRCCRC--CCSRSRRFRSRTTLRVRDPKFFQ--ITEKGEQSL 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Res. 3:321-329(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASFNLAS 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QRRIRRQLTRSQLELIEPEPTMALEPSEITVAFFSHKNANVSDP----EEVPPCLDSDPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GYNSDEQKTTE-----TASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQ 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ytic T lymphocytes.";
tted (OCT-1999) to the EMBL/GenBank/DDBJ databases
D86983; BAA13219.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40;
                                                                                                                                                                                                                                                                                                                                                                                                                                              P05164; 1CXP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AF200348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                              IPR003591;
IPR001007;
                                                                                                                                                                                                                                                                                                                                                                 IPR002007; Anim_peroxidase
IPR003598; Ig_c2.
                                                                                                                                                                                                                                                                                                IPR003006; Ig_MHC.
IPR001611; LRR.
                                                                                                                                                                                                                                                         IPR000483;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
   LRRCT;
                                                                                                       An_peroxidase; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF06354.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.6%;
                                  ţ٦,
                                                                                                                                                 LRR_typ.
VWF_C.
                                                                                                                                                                                                                       LRR_Nterm.
                                                                                                                                                                                                                                                         LRR_Cterm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 136.5; DB 11;
Pred. No. 0.0002;
Pred. No. 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epitopes recognized by human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawarabayasi Y., Ohara O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             deduced by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
 밁
                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9P121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 73
                                                         Matches
                                                                         Best
                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00093; VWC; 1.
PRINTS; PR00457; ANDEROXIDASE.
SMART; SM00408; IGC2; 4.
SMART; SM00008; LRRCT; 1.
SMART; SM00013; LRRNT; 1.
SMART; SM00013; LRRNT; 4.
SMART; SM00214; VWC; 1.
SMART; SM00214; VWC; 1.
PROSITE; PS01208; VWFC; UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunoglobulin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                               Submitted (FEB-1999) to the EMBL; AF126426; AAF37591.1;
                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Õ9P121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9P121
                                                                                                                                                                        InterPro; IPR003600; Ig_like InterPro; IPR003006; Ig_MHC Pfam; PF00047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                           Neurotrimin.
                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-2000
                                                                                                                 Immunoglobulin domain.
SEQUENCE 344 AA; 37
                                                                                                                                             SMART; SM00408; IGC2; 2.
SMART; SM00410; IG_like; 1.
                                                                                                                                                                                                                                                           Li G., Jin J., Tan X., Hu S., Yuan J., Qiang B.; "Cloning and identification of human neurotrimin full length cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  354 GSPARPTFVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRTPLPVDPRVNITPS-- 411
                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72
20 RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDNRVTRVAWLNRSTILYAGN 79
                                                                        Local
                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----RCCCCRRRCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NGTLTCVATWKSLKARKSATVNLTV------IRCPQDT----GGGINIPGVLSSLPSL 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQS 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAYLTVQVMGELFIPSVN 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSGSGNEVIEGPONATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDR 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GEPEPAITWNKDGVQVTESGKFHISPEGFLTINDVGPADAGRYECVARNTIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVVIEGQTVDFQC-EAKGNPPPVIAWTKGGSQLSVDRRHLVLSSGTLR--ISGVALHDQ- 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -----GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAFIIVQALPQFTVTPQD 458
                              RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLS--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTTVEVGANVQLP-----CSSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS01208; VWFC; UNKNOWN_1.
                                                                         Similarity
                                                                                                                                                                                                   IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel. 15, Created)
(TrEMBLrel. 15, Last sequence update)
(TrEMBLrel. 19, Last annotation update)
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                 Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.5%;
25.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167209 MW; E9B9A7069BF1ABFF CRC64;
                                                                                                                    37971 MW;
                                                                        6.4%; Score 133.5; DB 4; 24.5%; Pred. No. 0.00092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36;
                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 135; DB 4; Length 1496; Pred. No. 0.0046;
                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                  DA4D12C295ABBE3A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    344 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                             Indels
                                                                                          344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56;
                                                               49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  566
                                  59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                13;
```

```
δã
                                                     밁
                                                                                        δõ
                                                                                                                                   밁
                                                                                                                                                                          Ş
                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                  ACCOMENS OF THE PROPERTY OF TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                      Pfan; ...
PRINTS; PR00014; ...
SMART; SM0060; FN3; 6.
SMART; SM00408; IGC2; 3.
SMART; SM00410; IG_like; 2.
SMART; SM00410; IG_like; 2.
Twmunoglobulin domain; Repeat.
Twm 156533 MW; f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00041; fn3; 6. Pfam; PF00047; 1g; 4.
            192 LTCVA---
                                                     347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U10986;
HSSP; P40189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-95113183; PubMed-7813784;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1996 (TrembLrel. 01-NOV-1996 (TrembLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003962; FnIII_repeat.
InterPro; IPR003961; FN_III.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pierceall W.E., Reale
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q91562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumor suppressor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-2001 (TrEMBLrel.
                                                                                                                                                                                                              243 LQRPSNVVAIEGQDAVLECAVS-GYPTPTIVWMQGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         236
                                                                                                                                                                                                                                                 21 IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         225 NIPGVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110
                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80 DKWCLDPRVYLLSN---TQTQY-----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRV
                                                                                 PCEVTCL----PSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGT 191
                                             DIEFECAVSGKPS-----PTVKWTKNGEVVIPSDYFQIVDGSNLR----ILGLVKSDEGY 397
                                                                                                                        VLGG--SNLLISNVTDDDAGAYTCVATYKNENTSFSADLTVMVPPQFLNHPANLYAYESM
                                                                                                                                                                 QGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEDEYLE----IQGITREQSGDYECSAS-NDVAAPVVRRVKVTVNYPPYISEAKGTGVPV 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GQKGTLQCEASAVPSAEFQ---WYK 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ession of a homologue of the deleted in colorectal cancer (DCC) in the nervous system of developing Xenopus embryos."; Biol. 166:654-665(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H----LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR---HISPKAVGFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFV 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----VRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 109
                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003006;
                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA70168.1; -
    --TWKSLKARKSATVNLTVI-RCPQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                             6.4%; Score 133; DB 1: 25.7%; Pred. No. 0.0065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ig_MHC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        М.А.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01,
19,
                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Candia A.F., Wright C.V., Cho K.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                           61FEA12C8A674972 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1427
                                                                                                                                                                                                                                                                                                                                DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                  Length 1427;
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                              EPVPIRTR----KYS
                                                                                                                                                                                                                                                                                            48;
                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128
                                                                                                                                                                                                                                                                                            13;
Qy
                                        В
                                                                                                                                                               Qy
                                                                             Ş
                                                                                                                          밁
                                                                                                                                                                                                          В
                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                         Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9DBP0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003841; Na_Pi_cotrans.
Pfam; PF02690; Na_Pi_cotrans; 1.
TIGRFAMS; TIGR01013; 2a58; 1.
                                        565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:1342284; Slc34a2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN-C57BL/6J; TISSUE-LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                        523
                                                                                                                                                                 155
                                                                                                                                                                                                          484
                                                                                                                                                                                                                                                 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature 409:685-690(2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hayashizaki Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9DBP0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9DBP0
                                                                                                                                                                                                                                                                                                                                43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           398 YQCIAENEAGNIQTYAQLIIPDPAVPSSSILPSAPRDV-----VPVLVSS 442
                                                                                                                                                                                                                                                                                                                                                                                                            5 LLTVPEAVGSGSGNEVIEGPQNATVLK------
                                                                                                                                                                                                          SLQIALCH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK004832; BAB23600.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    697 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76244 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            697
```

```
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubhi F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubhi F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Blake J., Boffelli D., Hofman M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Sasaki H., Sato K., Schoenbach C., Seya T., Sihbata Y., Storch K.-F.,
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Havashiraki Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Solute carrier family 34 (sodium phosphate), member 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi,
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
259 TCTLTIRCCCCRRRCCG-----CNC-CCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         434 SVFTSAMTPLIGIGVISIERAYPLTLGSNI------GTTTTAILAALASPGNT--LRS 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380 LIMIVKLLGS-----VLRG-QVATVIKKTLNTDEPEPEAWLTGYLAILVGAGMTEIVQSS 433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                        LLLLVLCLRMLQFRCPR-----ILPLKLRDWNFLPLWMHSLKPWDNV-----ISLAT 611
                                                                                                                                                                                                 LTVI-----RCPQDTGGGINIPGVL---SSLPSLGFSLPTWGKVGLGLAGTMLLTP
                                                                                                                                                                                                                                                                                                    AKYRW---FAVFYLIFFFFVTP-----LTVFGLS---
                                                                                                                                                                                                                                                                                                                                                                                        ----WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVN 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLP------DIS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------FFFNISGI------LLWYPIPFTRLPIRLAKGLGNIS 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 131; DB 1: Pred. No. 0.0039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2A7B9384857EF16F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 697;
                                                                                                                                                                                                                                                                                               -LAGWPVLVGVGVPIIL 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----GSQARFNCTVS 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22;
```

B Ş 뮹

657 313

Ş В

373 NLASPEKVSNTTV 385

684

EVLSMKALSNTTV 696

Q9Z290

PRELIMINARY;

01-MAY-1999 (TrEMBLrel. 10,

```
"Characterization of a murine type II sodium-phosphate expressed in mammalian small intestine."; proc. watl. Acad. Sci. U.S.A. 95:14564-14569(1998). EMBL; AroB1499; AA080007-1; -. EMBL; AFOR1499; AA080007-1; -. MGD; MGI:1342284; Slc3482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Type IIb Na/phosphate-cotransporter SLC34A2 OR NPT2B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-NMRI; TISSUE-SMALL INTESTINE;
MEDLINE-99045724; PubMed-9826740;
Hilfiker H., Hattenhauer O., Traebert M., Forster I., Murer H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           612 TC-FQRRCCCCCRVCCRVCCMVCGCKCCRCSKCCRD-----QGEEEEEKEQ------ 656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Interpro; IPR003841; Na_Pi_cotrans.
Pfam; PF02690; Na_Pi_cotrans; 1.
TIGRFAMs; TIGR01013; 2a58; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 484 SLQIALCH-----FFFNISGI-----LLWYPIPFTRLPIRLAKGLGNIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     103 SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLP------DIS 154
                                                                                                                                                                                                                                                                                                                     211 LTVI-----RCPODTGGGINIPGVL---SSLPSLGFSLPTWGKVGLGLAGTMLLTP 258
                                                                                                                                                                                                                                                              565 LLLLVLCLRMLQFRCPR-----ILPLKLRDWNFLPLWMHSLKPWDNV------ISLAT 611
                                                                                                                                                                                                                                                                                                                                                                                  523 AKYRW---FAVEYLIFFFFVTP-----LTVFGLS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                       155 ----WELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVN 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43 QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGNENSGYNSDEOKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----DIPVKASGAFDNAAMSKEC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SVFTSAMTPLIGIGVISIERAYPLTLGSNI------GTTTTAILAALASPGNT--LRS 483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LIMIVKLLGS-----VLRG-QVATVIKKTLNTDFPFPFAWLTGYLAILVGAGMTFIVQSS 433
                                                                                                                                                                                                          TCTLTIRCCCCRRRCCG-----CNC-CCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                     SGNENSGYNSDEOKTTETASLPPKSCESSDPEORNSSCGPPHORADORPPRPASHPOASF 372
                                                                                                                                                   TC-FQRRCCCCCRVCCRVCCMVCGCKCCRCSKCCRD-----QGEEEEEKEQ-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76286 MW; 839E5CCB0F565265 CRC64;
                                       ----DIPVKASGAFDNAAMSKEC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 131; DB 11
Pred. No. 0.0039;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           697 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124; Indels 168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 697;
                                                                                                                                                                                                                                                                                                                                                                                            -LAGWPVLVGVGVPIIL 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --- QDEGKGQV 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cotransporter
                                             -QDEGKGQV 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
Q22048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DE GN OOC OOC OOC OOC OOC RN RP RA RP RA RT RA RT DR R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
맑
                                                                                                                                                                                                                                                                                                                                                                                                                                    001761
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q22048; PRELIMINARY;
Q22048; Q1-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-MAR-2002 (TrEMBLrel. 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T01B7.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T01B7.8 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00198; 4FE4S_FERREDOXIN; UNKNOWN_1.
PROSITE; PS00269; DEFENSIN; UNKNOWN_1.
PROSITE; PS00022; EGF_1; UNKNOWN_1.
PROSITE; PS01208; VWFC; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sims M.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001450; 4Fe4S_ferredoxin.
InterPro; IPR001271; Defensin_mammal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; Z66499; CAA91301.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    investigating biology.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 none;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684 EVLSMKALSNTTV 696
                                                                                                                                                                                                                                                                                   01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPR000561; EGF-Interpro; IPR001007; VWF_
                                                                                                                                                                                                                                                                                                                                                                         001761;
                                                                                                                                                                                                                                                                                                                                                                                                        001761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome sequence of the nematode C.elegans:
                           SEQUENCE FROM N.A. STRAIN-BRISTOL N2:
                                                                                                                                                Eukaryota; Metazoa; Nemata
Rhabditidae; Peloderinae;
                                                                                                                                                                                                    Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
   MEDLINE=99069613; PubMed=9851916;
                                                                                                              NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGC 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     102 CRTCCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277 -- NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58 KRQGGCGCGCGC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 LAILLAIGTFIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                        elegans UNC-89 protein (corresponding sequence C09D1.1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 6.2%; Score 129.5;
Similarity 32.1%; Pred. No. 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           164 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16499 MW;
                                                                                                                                                                              Nematoda; Chromadorea; Rhabditida; Rhabditoldea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EGF-like.
                                                                                                                                                   Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 0.00081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C002D48D36C9FCED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GCCGCGGGGG--CGCCCCRPRCCCCCRRCCTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164 AA
                                                                                                                                                                                                                                                                                                                                                                                                                    6632 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               platform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

9

Q 망 Q

380

434

Query Match Best Local Matches

88;

Conservative

Similarity

6.3%;

697 AA;

Q В

Qy рЬ Ş 멍 δÃ 밁

밁

Ş 밁 20

NLASPEKVSNTTV 385

Q9Z290
ID Q9Z29
ID Q9Z29
AC Q9Z29
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MA
DT 01-MI
DT 19
E Ukar
OC Mamma
OC Mamma
OX NCBI
RN [1]
RP SEQUI
RC STRAI
RX Hilf:
RA H

SEQUENCE FROM N.A NCBI_TaxID=10090;

Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;

Mus musculus

(Mouse)

Chordata;

```
Search completed: April 28, 2003, 21:07:42 Job time: 41.1283 secs
                                                                                                                 Š
                                                                                                                                                    В
                                                                                                                                                                                   Q
                                                                                                                                                                                                                         Дb
                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                                 QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 6.2%; Score 129; DB 5; Length 6632; Best Local Similarity 23.0%; Pred. No. 0.11; Matches 59; Conservative 41; Mismatches 97; Indels 60; Gaps
                                                                         2261 TVNGGNKKPEFVQAPQN 2277
                                                                                                                                   2202 -EVSWLLNGQPLTKSDTVQVVDHGDGTYHVTIAEAKPEMSGTLTAKAKNAAGECETSAKV 2260
                                                                                                                                                                                                          2144 TVKVTAQNSAGQDSKQADLKVEPNVKAPKFKSQLTDKVADEGEPLRWNLELDGPSPGT-- 2201
                                                                                                                                                                                                                                                                               2098 IS-GEPAPTVKWTINEKIVEESRTITTIKTEDVYT-----LKISNAKIEQTG 2143
                                                                                                                                                                                                                                                                                                                                                     2038 LIIPNAQDSGKITVEASNEVGSSESSAQLTVNPPSTTPIVVDGPKSVTIKETETAEFKAT 2097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN-BRISTOL N2;
Du Z., Le T.T., Wilson R.;
"The sequence of C. elegans cosmid C09D1.";
Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Waterston R.;
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF003131; AAB54132.2; -.
SEQUENCE 6632 AA; 731665 MW; 262D3EDD62960E89 CRC64;
                                                                                                          210 NLT-----VIRCPQD 219
                                                                                                                                                            151 PDISWEL-GLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATV 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Waterston R.; "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium."; Science 282:2012-2018(1998).
                                                                                                                                                                                                                                           99 NIRCSLONSRLHGSAYLTVQVMGELFIPS-----VNLVVAENEPCEVTCL---PSHWTRL 150
                                                                                                                                                                                                                                                                                                                  41 VSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSG 98
                                                                                                                                                                                                                                                                                                                                                                                       6 LTVPEAVGSG-----SGNE------40
                                                                                                                                                                                                                                                                                                                                                                                                                            10;
```

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: April 28, 2003, 16:24:30; Search time 10.3692 Seconds (without alignments) 1543.990 Million cell updates/sec

Title:
Perfect score:
Sequence:

US-09-729-264-6 2077 1 MERHLLTVPEAVGSGSGNEV......HPQASFNLASPEKVSNTTVV 386

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched:

112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

33	31	. 30	29	28	27	26	25	24	23	22	2 6	3 F	10	17	16	15	14	13	12	11	10	9	8	7	6	ъ	4	ω	N	'n	No.	Result
102.5	102.5	102.5	103.5	104.5	104.5	105	105.5	105.5	0	109.5	109.5	110.0	110 5	113.5		114.5	117.5	•	122.5	125	128	128	128	129	129	130	131	133	139.5	151	Score	
4.9	4.9	4.9		٠	5.0	5.1	5.1	5. 1	ر ا	υ (ω (л i	n (л (л 			5.5	5.7	5.7	5.9	•			6.2	•	6.2	σ. ω	6.3	6.4	6.7	7.3	•	% Query
365 830	348	4	338	879	ယ ယ ယ	319	3707	862	1092	990	٥ / ٥ 4 م	100	365	1377	416	1461	1443	620	4393	1070	1914	1447	345	353 353	ω 4 5	345	1447	337	344	404	Length [
11	_	ш	_	, ب	_	– ,	ا سم	۱ ب	۱ ر	_ +	- '-	۰ ۲		سا	μ	₩.	_	1	_	_	سا	ب	_	ш,	_	_	μ	ш	ш	۲	DB	
CXAR_MOUSE SREC_HUMAN	KILO_RAT	CD2 RAT	LAMP CHICK	FPRP RAT	AMAL DROME	A33 HUMAN	PGBM MOUSE	CD22 MOUSE	NCA2 YENTA	TYOS HIMAN	FCCK_UKOME	TSOOM TIOSE	CXAR_HUMAN	NEO1_RAT	RAGE_BOVIN	NEO1_HUMAN	NEO1_CHICK	SMP_COTJA	PGBM_HUMAN	PTK7_HUMAN	KMLS_HUMAN	DCC_HUMAN	OPCM RAT	CEPU CHICK	OPCM BOVIN	OPCM HIMAN	DCC_MOUSE	G55A_CHICK		RAGE_HUMAN	ID	
																															; (((((((((((((((((((•
P97792 Q14162	C0260	P08921	000	050785	015364	099795	005793	D37330	D 0 0 0 0 1 1 0	006/19	008180	062	P78310	P97603	Q28173	Q92859	090610	092154	P98160	013308	015746	P43146	D32736	090773	75811a	01/083	P70211	098892	062718	015	Des	
192	3.	2	9	200	7	205	793		J F	0	081	90	310	503	173	859	010	154	160	308	746	146	736	773	7.5	201	211	892	718	109	cri	
മഗ		rattus	משללוופ	- 5	drosophila	homo sapien			Tonos apren	drosophila	drosophila			~		homo sapien	callus call					homo sanien		116			mus mu	gallus	rattu	homo sapien	Description	

45	44	43	42	41	40	39	38	37	36	ω S	34	
98.5	99	99	99	99	99.5	99.5	100	100	100	100.5	100.5	
4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
858	2499	359	338	338	1260	980	1241	1010	873	2481	1906	
سز	۳	Н	Н	Н		۳	ш	س	1	_	ш	
NCA1_RAT	MPRI_BOVÍN	LACH_DROME	LAMP_RAT	LAMP_HUMAN	CAML_MOUSE	TYO3_RAT	NPHN_HUMAN	CONT_CHICK	FAS2_DROME	UN52_CAEEL	KMLS_CHICK	
P13596										Q06561	P11799	
rattus norv	bos taurus	drosophila	rattus norv	homo sapien	mus musculu	rattus norv	homo sapien	gallus gall	drosophila	caenorhabdi	gal·lus gall	

ALIGNMENTS

	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	
Rowen L., Dankers C Banta A., Spies T., Submitted (FEB-1997 [4] SEQUENCE FROM N.A. Abedin M.J., Yoneku Yamamoto H.; "Molecular heteroge endproducts."; Submitted (JAN-2000 [5] UENCE FROM N.A. Malherbe P., Richar Schuler A., Huber G "CDNA Cloning of a Advanced Glycation co-expressing cell- amyloid precursor p submitted (MAY-1999 [6]	RX MEDLING-92340547; PubMed=1378843; RA Neeper M., Schmidt A.M., Brett J., Yan S.D., Wang F., Pan Y.C., RA RElliston K., Stern D., Shaw A.; RT "Cloning and expression of a cell surface receptor for advanced RT glycosylation end products of proteins."; RL J. Biol. Chem. 267:14998-15004(1992). RN [2] RP SEQUENCE FROM N.A. (ISOFORM 1). RY MEDLINE-95137587; PubMed=7835890; RA MEDLINE-95137587; PubMed=7835890; RA Sugaya K., Fukagawa T., Matsumoto K., Mita K., Takahashi E., Ando A., RA Inoko H., Ikemura T.; RT "Three genes in the human MHC class III region near the junction with RT the class II: gene for receptor of advanced glycosylation end RT products, PBX2 homeobox gene and a notch homolog, human counterpart RL Genomics 23:408-419(1994). RP SEQUENCE FROM N.A. (ISOFORM 1).	SUI

```
DOMAIN
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                         DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                          SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 1.
PROSITE; PS00290; IG_MHC; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                end-products (RAGE) gene.";
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hudson B.I., Futers T.S.;
"Novel polymorphisms in the receptor for advanced glycation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 1-12 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Lung;
                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_11ke.
 CONFLICT
                          VARIANT
                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       MIM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                         VARSPLIC
                                                                                                                      VARSPLIC
                                                                                                                                  DOMAIN
                                                                                                                                                CARBOHYD
                                                                                                                                                              CARBOHYD
                                                                                                                                                                          DISULFID
                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                     TRANSMEM
                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                   Immunoglobulin domain; Glycoprotein; Transmembrane;
Alternative splicing; Polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN. SIMILARITY: CONTAINS 2 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE SPECIFICITY: ENDOTHELIAL CELLS..
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: MEDIATES INTERACTIONS OF ADVANCED GLYCOSYLATION END PRODUCTS (AGE). THESE ARE NONENZYMATICALLY GLYCOSYLATED PROTEINS WHICH ACCUMULATE IN VASCULAR TISSUE IN AGING AND AT AN ACCELERATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE PRODUCTS: 2 ISOFORMS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secreted (isoform 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Type I membrane protein (isoform 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ARE PRODUCED BY ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RATE IN DIABETES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               M91211;
D28769;
                                                                                                                                                                                                                                                                                                                                                                                                   PF00047; ig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BC020669; AAH20669.1; AF208289; AAG35728.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U89336; ADDA (1993) -- AB036432; BAA89369.1; -- AJ133822; CAB43108.1; -- AJ133822; CAB43108.1; -- AJ133822; CAB430669.1; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   U89336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HGNC:320; AGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (JAN-2002)
                                                                                                         38
144
259
259
81
380
380
275
                                                                                                                                                                                                               23
343
364
31
137
252
                           100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB47491.1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA03574.1; -.
BAA05958.1; -.
                                                                                                                                                                                                                                                                                                                                                              IG_MHC; 1.
                                                                                                         342
363
404
106
215
215
308
301
208
301
384
404
                                                                                                                                                                                                                                                                                                           404
                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENDOTHELIAL CELLS.
                                                  GVPLPLPPSPVLILPEIGPQDÓGTYSCVATHSSHGPQESRA
VSISIIEPGEBGPTAGSVGGSGLGTLALALGILGGLGTAAL
LIGVILWQRQRRGEERKAPENQEEEERAELNQSEEPEAG
ESSTGGP -> VSDLEBGAGRTTRGGANCRLCGRIRAGNSS
PGPGDPGRPGDSRPAHWGHLVAKAATPRRGEEGPRKPGGRG
                                                                                                                                                                                                               CYTOPLASMIC (POTENTIAL).
IG-LIKE V-TYPE DOMAIN.
IG-LIKE C2-TYPE DOMAIN 1
IG-LIKE C2-TYPE DOMAIN 2
 /FTId=VAR_011338.
M -> G (IN REF. 1).
                                                                                                                                                                                                                                                                                ADVANCED GLYCOSYLATION END SPECIFIC RECEPTOR. EXTRACELLULAR (POTENTIAL).
                                       GACRIESVGGI
                                                                                                                                                N-LINKED (GLCNAC. . N-LINKED (GLCNAC. .
                                                                                                                      MISSING (IN ISOFORM
                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                                                     POTENTIAL
                                                                                                                                                                                                                                                                                                                        POTENTIAL.
                            '> R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (SHOWN HERE) AND 2/RAGESEC
                                         (IN ISOFORM
                                                                                                                       2)
                                                                                                                                                                                                                                                                                                                                                  Repeat; Signal;
                                                                                                                                                (POTENTIAL).
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SO
                                                                                                                                                                                                                                                                                                                                                                                                                                            NTRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                              RAT
the European Bioinformatics Institute of Bioinf use by non-profit institutions as modified and this state.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                       This SWISS-PROT entry is copyright. It is produ
between the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                          STRAIN-Sprague-Dawley;
MEDLINE-95198094; PubMed-7891157;
                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1997 (Rel. 35, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update) Neurotrimin precursor (GP65).
                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1997
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                     Q62718;
                                                                                                                                                                                                                                                                                                                                                                                                                               NTRI_RAT
                                                                                                                                                                                                                                                            Struyk A.F.,
                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
                                                                                                                                                                                                                                     "Cloning of neurotrimin defines a new subfamily of differentially
                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270 RRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                             SIMILARITY:
                                                                                                     SIMILARITY:
                                                                                         SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TETASLPPKSCESSDPEQRNSSCGPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IIINDRFTS----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG------KP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG----WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PGEEG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KD---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                               HINDBRAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         (Rel. 35, Created)
                                                                                                                                                                                                                                                            Canoll P.D., Wolfgang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-
                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -QSEEPEAGESSTGGP
                                                                             CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                     BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42802 MW;
                                                                                                                                                                                                                                                                                                AND SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23.3%;
                    institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 151;
                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0D584C436C30CCE7 CRC64;
       not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QRRGEERKAPENQEEEEERAELN-
                                                                                                                                                                                                                                                             M.J., Rosen C.L., D'Eustachio
                                                      It is produced through
                                                                                                                                                                                                                                                                                                   217-229
                                                                                                                                                                                                                                                                                                                                                                                                                                   344 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7e-05;
                 There are no restrictions on ong as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112;
                                                                                                                                                                                                                                                                                                                                       Muridae;
      Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 404;
                                         and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels '146;
        уd
                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                       Murinae;
                                                                                                                                                                                        a GPI-anchor
          and
                                           EMBL
                                              a collaboration
          for
                                                                                                                                                                                                                                                                                                                                       Rattus
                                           outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
          commercia
                                                                                                                              SIN
                                                                                                                                                                                                                                                                 ъ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322
                    way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19;
```

```
δÃ
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                              Gallus gallus (Chicken).

Gallus gallus (Chicken).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Phasianidae; Phasianidae; Phasianidae; Phasianidae;
                                                                                                                                                                                                                          _CHICK
                                                                                                                    01-NOV-1997 (Rel. 35, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Neurite inhibitor 1555-A precursor (OBCAM protein
                                                                                                                                                                         Q98892;
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat;
SIGNAL
   TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
                  SEQUENCE FROM N.A
                                                                                                                                                                                                         G55A_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                               NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00410; IG_like; 1. SMART; SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00047; ig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U16845; AAA67445.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                       236
                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                129
                                                                                                                                                                                                                                                                                                                                                                                                                                              110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [mmunoglobulin domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLS--
                                                                                                                                                                                                                                                                                   GQKGTLQCEASAVPSAEFQ---WFK
                                                                                                                                                                                                                                                                                                                 NIPGVL----SSLPSLGFSLPTWGK
                                                                                                                                                                                                                                                                                                                                                SEDEYLE - - - - IQGITREQSGEYECSAS - NDVAAPVVRRVNVTVNYPPYISEAKGTGVPV
                                                                                                                                                                                                                                                                                                                                                                            PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGI
                                                                                                                                                                                                                                                                                                                                                                                                           H----LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR---HISPKAVGFV
                                                                                                                                                                                                                                                                                                                                                                                                                                         HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DKWCLDPRVVLLSN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----VRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDNRVTRVAWLNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 31
32 344
50 122
150 208
208 302
57 115
57 115
17 201
17 201
18 295
216
284
284
295
305
305
321
37998 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.78;
24.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -TQTQY-----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.

N-LINKED (GLCNAC.

N-LINKED (GLCNAC.)

GPI ANCHOR (POTENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 139.5; DB 1;
Pred. No. 0.00049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REMOVED IN MATURE FORM IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NEUROTRIMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL
                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CBB39BE53B33B224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL
                                                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                           gamma isoform).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL).
                                                                             Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49;
                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13;
 밁
                           Qγ
                                                                                                                         Вb
                                                            밁
                                                                                     QY
                                                                                                                                                   Qγ
                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                               STEET TETT TO BE REPORTED TO BE REPO
                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                         DISULFID CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat;
                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brain
171
                             167
                                                            123
                                                                                          111
                                                                                                                         74
                                                                                                                                                       59
                                                                                                                                                                                    16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Signal
```

```
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "A family of glycoproteins (GP55), which inhibit neurite ou are members of the Ig superfamily and are related to OBCAM, neurotrimin, LAMP and CEPU-1.", J. Cell Sci. 109:3129-3138(1996).
-!- FUNCTION: INHIBITS NEURITE OUTGROWTH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lodge A.P., Kim D.-S., Howard M.R., McNamee C.J., Smith N., "Cloning of CEPU-S, a secreted isoform of CEPU-1, and OBCAM chick: structural diversity of IgLON family proteins."; Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases. [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -i- SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor.
-i- TISSUE SPECIFICITY: RESTRICTED TO THE NERVOUS SYSTEM.
-i- DEVELOPMENTAL STAGE: INCREASES DURING DEVELOPMENT FROM VERY LOW
LEVELS AT EMBRYONIC DAY 10 AND IS MOST ABUNDANT AFTER HATCHING.
-i- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wilson D.J.A., Kim D.-S., Clarke G.A., Marshall-Clarke S., Moss D.J. "A family of glycoproteins (GP55), which inhibit neurite ourgrowth,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00047; ig; 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; Y08170; CAB41420.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=97157768; PubMed=9004047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 64-337 FROM N.A., AND PARTIAL SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [mmunoglobulin
                                                                                                                                                                                                                                                                                                                                                                    5 LLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL----
GFVSEDEYLE----ITGITREQSGEYECSAV-NDVAVPDVRKVKVTVNYPPYISNAKNTG
                                                                                                                                                         GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSSY
                                                                                                                                                                                                                                                                                                                       LLFIP-GVPVRSGDATFPKAMDNVTVRQGESATLRCTVDDRVRRVAW-LNRSTILYAGND
                                                    YFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IRCPQDTG
                                                                                                         ----LIVQVPPQIVNISSDITVNEGSSVTLMCLAFGRPE-----PTVTWR----HLSGKGQ
                                                                                                                                                                                                              KWSIDNRVVILSN---TKTQY-----SIKIHNVDVYDEGPYTCSVQTDNHPKTSRVH
                                                                                                                                                                                                                                                                --SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM00410; IG_like; 1.
SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR003006; Ig_MHC.
IPR003598; Ig_c2.
IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
317
317
115
201
201
108
1194
133
133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36887 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.4%;
25.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                              36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-LINKED (GLCNAC. ..) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEURITE INHIBITOR GP55-A (
REMOVED IN MATURE FORM (PO'
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 133;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                            107;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 337;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) (POTENTIAL).
) (POTENTIAL).
) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNAs from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Moss D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.J.;
                                                                                                                                                           166
                                                                                                                                                                                                                                                                                                                     73
                                                                                                                                                                                                                                                                                                                                                                         58
                                                                                                                                                                                                                                                                                                                                                                                                                         16;
```

QY

222 GGINIPGVL----SSLPSLGFSLPTWGKVGLGLA

251

```
밁
                          Pfam; PF00041; fn3; 6.
Pfam; PF00047; 1g; 4.
Pfanr; PF000014; FNTYPEIII.
SMART; SM00060; FN3; 6.
SMART; SM00410; IG_11ke; 2.
SMART; SM00408; IGC2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P70211;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cooper H.M., Armes P., Britto J., Gad J., Wilks A.F.; "Cloning of the mouse homologue of the deleted in colorectal cancer gene (mDCC) and its expression in the developing mouse embryo.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DCC_MOUSE
                                                                                                                                                                                                   MGD;
                                                                                                                                                                                                                                                                                          use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JUN-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oncogene 11:2243-2254(1995).
Repeat;
                                                                                                                                                      InterPro;
                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                               entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cooper H.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=BALB/c; TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=96112625; PubMed=8570174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=BALB/c;
                                                                                                                        InterPro;
                                                                                                                                     InterPro;
                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     226
                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            produced by alternative initiation. A third isoform: C is produced by alternative splicing.
TISSUE SPECIFICITY: IN THE EMBRYO, EXPRESSED AT HIGH LEVELS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: IMPLICATED AS A TUMOR SUPPRESSOR GENE.
                                                                                                                                                                                                                                                                                                                                                                                                                                     EXPRESSED DURING MID GESTATION. LEVELS DECREASE IN LATE GESTATION AND REMAIN AT THIS LEVEL IN THE ADULT.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEVELOPING BRAIN AND NEURAL TUBE. IN ADULT, HIGHLY EXPRESSED BRAIN WITH VERY LOW LEVELS FOUND IN TESTIS, HEART AND THYMUS ISOFORM C IS EXPRESSED ONLY IN THE EMBRYO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Type I membrane protein.
ALTERNATIVE PRODUCTS: 2 isoforms; A (shown here) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEVELOPMENTAL STAGE: LOW LEVELS IN EARLY GESTATION. HIGHEST LEVELS
                                                                                                                                                                                                                                                                                                                                                                                                                         SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASVGQKGILQCEASAVPVAEFQ---WFKEDTRLA
                                                                                                                                                                                                  MGI:94869;
                                                                                                                                                                                                                    X85788;
P56276;
Anti-oncogene; Alternative initiation; Alternative splicing.
                                                                                                        IPRUUJO
; IPRO03006; Ig_n...
); IPRO03598; Ig_c2.
; rnn1600; Ig_like.
                                                                                                                                                                    IPR003961; FN_III.
IPR003962; FnIII_repeat.
                                                                                                                                                                                                                  CAA59786.1;
1TLK.
              Immunoglobulin domain; Transmembrane; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1447
                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   c).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٠.
                                                                                                                                                                                                                                                                                                            as its content
                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                               Ьy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EXPRESSED
                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GΆ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; are
                                                                                                                                                                                                                                                                                                 for commercia:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE
                                                                                                                                                                                                                                                                                                               no
```

```
DЬ
                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                    QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPCM_HUMAN
                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                   SEQUENCE FROM N.A.
TISSUE=Occipital corte
MEDLINE=95237612; Pubm
Shark K.B., Lee N.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
INIT_MET
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID DISULFID
                                                                                                                             01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Opioid binding protein/cell adhesion molecule
(Opioid-binding cell adhesion molecule) (OPCML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARSPLIC
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSMEM
"Cloning, sequencing and localization to chromosome 11 of a cDNA encoding a human opioid-binding cell adhesion molecule (OBCAM).";
                                                                                    Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                  Q14982;
                                                                                                                                                                                               OPCM_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                     OPCML OR OBCAM
                                                                        NCBI_TaxID-9606;
                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                  380
                                                                                                                                                                                                                                                                      170
                                                                                                                                                                                                                                                                                             321
                                                                                                                                                                                                                                                                                                                   111
                                                                                                                                                                                                                                                                                                                                        276
                                                                                                                                                                                                                                                                                                                                                                                 217 PASIRTGNEAEVRILSDPGLHRQLYFLQRPSNVIAIEGKDAVLECCVS-GYPPPSFTWLR
                                                                                                                                                                                                                                                                                                                                                             53
                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFV
                                                                                                                                                                                                                                                 VGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQSSA 413
                                                                                                                                                                                                                                                                      PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA 207
                                                                                                                                                                                                                                                                                             ASAELTVLVPPWFLNHPSNLYAYESMDIEFECAVS-GKPVPTVNWMKNGDVVIPSDYFQI
                                                                                                                                                                                                                                                                                                                                        GEEVI - - - -
                                                                                                                                                                                                                                                                                                                                                                                                       PEAVGSGSGNEV-----
                                                                                                                                                                                                                                                                                                                                                          SDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLH 110
                                                                                                                                                                                                                                                                                                                                                                                                                            55;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               941
161
261
352
352
60
94
299
318
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                           cortex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1447
1447
1447
1097
1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1447
124
219
317
407
522
618
716
816
                                PubMed=7721093;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1042
117
                                                                                                                                                                                                                                                                                                                                       -----QLRSKKYSLLGG--SNLLISNVTDDDSGTYTCVVTYKNENIS
                                                                                               Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                       6.3%;
25.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158298
                                                                                                                                                                                                                                                                                                                                                                                                    -----IEGPQNATVLKGSQARFNCTVSQGW--KLIMWAL 52
                                                                                                                                                                                                                                                                                                                                                                                                                            33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , WM
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 131; DB
Pred. No. 0.01
33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. . .)
N-LINKED (GLCNAC. . .)
MISSING (IN ISOFORM C).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
TUMOR SUPPRESSOR PROTEIN
TUMOR SUPPRESSOR PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CYTOPLASMIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FOR ISOFORM B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EXTRACELLULAR (POTENTIAL)
                                                                                      Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0D1F1097C22D5B9F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLCNAC...

(GLCNAC...

(GLCNAC...

(GLCNAC...

(GLCNAC...
                                                                                                                                                                                               345
                                                                                                                              (OPCML)
                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                               Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                             90;
                                                                                                                                         precursor (OBCAM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1447;
                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ISOFORM
ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                   275
                                                                                                                                                                                                                                                                                                                     169
                                                                                                                                                                                                                                                                                                                                         320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B .
```

9

Gene 155:213-217(1995).

P11834; 01-OCT-1989 (Rel. 1 01-OCT-1989 (Rel. 1 16-OCT-2001 (Rel. 4

OPCM_BOVIN

STANDARD;

PRT;

A

01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Opioid binding protein/cell adhesion molecule precursor (OBCAM)
(Opioid-binding cell adhesion molecule) (OPCML).

Bos taurus (Bovine). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OPCML OR OBCAM OR OCAM.

```
Š
                                                                                               В
                                                                                                                                                                                     В
                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                              δÃ
           밁
                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                        δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFT TO THE TEST OF THE TEST O
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00047; 1g; 3.
SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Repeat; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through
228 KAKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEETRLATGLDG 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; L34774; AAA36387.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               - 1- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                            216 CPQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAG 252
                                                                                               173
                                                                                                                                           165
                                                                                                                                                                                       128
                                                                                                                                                                                                                                   109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [mmunoglobulin domain;
                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                       59
                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                               3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INVOLVED IN CELL CONTACT. SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    similarity).
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION:
                                                                                                                               SYY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----
                                                                                                                                                                                                                   LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 164
                                                                                                                                                                                                                                                               NDKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                      SVKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYIS
                                                                                                                                                                                VH----LIVQVPPQIMNISSDITVNEGSSVTLLCLAIGRPE-----PTVTWR--
                                                                                                                                                                                                                                                                                                           ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 108
                                                                                                                                                                                                                                                                                                                                                        RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HGNC:8143; OPCML.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             345
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    323
150
150
237
237
157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BINDS OPIOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27
322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 130; DB 1;
Pred. No. 0.0028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GPI-ANCHOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REMOVED IN MATURE FORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPIOID BINDING PROTEIN/CELL ADHESION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E7AD17BEA1AA3FF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLCNAC...
(GLCNAC...
(GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  108;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                              70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for commercia
                                                                                                                                  IR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no
                                                                                                                                                                                                                                                                                                                                                                                                                                              17;
```

```
OPCM_BOVIN

OPCM_BOVIN

AC PINSON

AC PONSON

AC PONSON
γ
                                           Matches
                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                     DISULFID DISULFID DISULFID
                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR003600; Ig_like Pfam; PF00047; ig; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein with potential roles in opioid binding and cell contact.";
EMBO J. 8:489-495(1989).
-!- FUNCTION: BINDS OPIOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schofield P.R., McFarland K.C., Hayflick J.S., Wilcox J.N., Cho T.M., Roy S., Lee N.M., Loh H.H., Seeburg P.H.; "Molecular characterization of a new immunoglobulin superfamily
                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea; Bovidae; Bos. MCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; S03199; S03199.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X12672; CAA31192.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -1- SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunoglobulin domain; Cell adhesion; Glycoprotein; GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003006; Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=89251576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INVOLVED IN CELL CONTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM00408; IGc2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SM00410;
                                                                   Similarity
                                                                                                                                       345 AA;
                                           Conservative
                                                                                                                                                                                                                                                                                                                       323
50
150
237
237
157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IG_like; 1.
                                                                                                                                322 G
37914 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=2721489;
                                                                                                                                                                                  44
70
140
285
293
306
                                                                                                                                                                                                                                                                                                                       345
122
209
303
115
202
296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27
322
                                                            6.2%;
25.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ig_c2
                                           33;
                                                                                                                                                                         N-LINKED (GLCNAC...) (
                                                              Score 129;
Pred. No. 0.
                                                                                                                                  GPI-ANCHOR (POTENTIAL).
D1ECC8D9E7D8CB19 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                      REMOVED IN MATURE FORM IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPICID BINDING PROTEIN/CELL ADHESION
                                         Mismatches
                                                                 DB 1;
                                           109;
                                                                                    Length 345;

    .) (POTENTIAL)

                                         Indels
                                                                                                                                                                                                                                            ) (PROBABLE).
) (POTENTIAL).
) (POTENTIAL).
                                                                                                                                                                                                                           (PROBABLE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                         66;
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (By
                                      16;
```

```
ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
DAR REAL PROCESS CONTRACTOR CONTR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
CEPU_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CEPU_CHICK STA
Q90773;
Q1-NOV-1997 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CEPU-1 protein precursor. Gallus gallus (Chicken). Eukaryota; Metazoa; Chorda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1997 (Rel. 35, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. The use by non-profit institutions as long use by non-trofit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Neurosci. 16:1770-1779(1996).
-!- FUNCTION: IT MAY BE A CELLULAR ADDRESS MOLECULE SPECIFIC
Pfam; PF00047; ig; 3. SMART; SM00410; IG_1i SMART; SM00408; IGc2;
                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                     EMBL; Z72497; CAA96578.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         developing cerebellar Purkinje cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Spaltmann F., Bruemmendorf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96370549; PubMed=8774445;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                    InterPro; IPR003006;
InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CEPU-1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 KAKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     216 CPQDTGGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GOLGI OR GRANULE CELLS:
GOLGI OR GRANULE CELLS:

DEVELOPMENTAL STAGE: EXPRESSED BY DEVELOPING CEREBELLAR PURKINJE
CELLS. EXPRESSION COINCIDES WITH THE GROWTH OF THE DENDRITIC TREE,
AFTER PURKINJE CELLS HAVE FINISHED THEIR MIGRATION FROM THE
AFTER PURKINJE CELLS HAVE FINISHED THEIR MIGRATION I THE ADULT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VENTRICULAR ZONE (FROM E15 UNTIL E21). SIMILARITY: BELONGS TO THE IMMUNOGLOBU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALTERNATIVE PRODUCTS: 2 ISOFORMS; A MAJOR FORM AND A MINOR FORM (SHOWN HERE); ARE PRODUCED BY ALTERNATIVE SPLICING.
TISSUE SPECIFICITY: FOUND ON THE DENDRITES, SOMATA AND AXONS OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Attached to the membrane by a GPI-anchor ALTERNATIVE PRODUCTS: 2 ISOFORMS; A MAJOR FORM AND A MINOR FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUNCTION: IT MAY BE A CELLULAR ADDRESS MOLECULE SPECIFIC TO PURKING CELLS. IT MAY REPRESENT A RECEPTOR OR A SUBUNIT OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VH----LIVQVPPQIMNISSDVTVNEGSSVTLLCLAIGRPE-----PTVTWR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEVELOPING PURKINJE CELLS. UNDETECTABLE ON OTHER NEURONS LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RECEPTOR COMPLEX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NDKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SYY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SVKEGQGFVSEDEYLE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a novel immunoglobulin superfamily molecule, is expressed
                                                                IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                IG_like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata;
                                                                                                                                                     Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                              There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑA
                                                                                                                                                                                                                                                                                                                                             as its content
                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           251
                                                                                                                                                                                                                                                                                                                ЬY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Þ
                                                                                                                                                                                                                                                                                                                   commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bу
                                                                                                                                                                                                                                                                                                                                                       ņ
                                                                                                                                                                                                                                                                                                                                                                                    g
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SO THE FETT TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
      OPCM_RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPCM_RAT STANDARD: PRT; 345 AA. p32735; Q01654; P32735; Q01653; Q01653; Q01653; Q01653; Q01653; Q01653; Q01653; Q01653; Q01654; P32735; Q01653; Q01654; Q01654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Opioid-binding cell adhesion molecule) (OPCML) OPCML OR OBCAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunoglobulin domain; Cell adhesion;
MEDLINE=95198094;
Struyk A.F., Canol
Salzer J.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARSPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LIPID
                                                                                                                                                                                       "Opioid-binding cell adhesion molecule rat brain cDNA library.";
                                                                                                                                                                                                                                                                                       MEDLINE-92347701; PubMed=1339369;
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rattus norvegicus (Rat).
                                                                  SEQUENCE OF 195-214, AND GPI-ANCHOR MEDLINE=95198094; PubMed=7891157;
                                                                                                                                                            Gene 117:249-254(1992)
                                                                                                                                                                                                                                                         Lippman D.A., Lee
                                                                                                                                                                                                                                                                                                                         TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113 AYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPD--ISWELGLLVSHSSYYFVP 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                235 QKGILMCEASAVPSADFQ---WYK 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83 DPRVVLLANTKTQYSIQ------IHDVDVYDEGPYTCSVQTDNHPKTSRVH-- 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35 TFPKAM-----DNVTVRQGESATLRCSVDNRVTRVAWLNRSSILYAGNDKWCL 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7 TVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQ-----GW----KLIMWALSDMVVL 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IRCPQDTGGGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPGVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --LIVQVSPKITETSSDISINEGGNVSLTCIA---TGRPDPTITWR---HISPKAVGFIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDEYLE - - - - ITGITREQSGEYECSAS - NDVAAPVVQRVKVTVNYPPYISDAKSTGVPVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         353 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155
                                 Canoll P.D., Wolfgang M.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alternative splicing
                                                                                                                                                                                                                                                      N.M., Loh H.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42
150
282
290
303
330
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38736 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 129;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REMOVED IN MATURE FORM IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MISSING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GPI-ANCHOR (POTENTIAL).
MISSING (IN MAJOR ISOFORM).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2550C48591EBBBA6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.0035
                                                                                                                                                                                                                               (OBCAM)-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 353;
                                       Rosen C.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                precursor (OBCAM)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GPI-anchor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (POTENTIAL)
                                           D'Eustachio
                                                                                                                                                                                                                                     clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus
                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
```

```
Q
                                                                                                       밁
                                                                                                                                                          밁
                                                                                                                                                                                                                                                                       δÃ
                                                뫄
                                                                                                                             δÃ
                                                                                                                                                                                  Qy
                                                                                                                                                                                                               Query Match
Best Local S
Matches 73
                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00047; 1g; 3,
SMART; SM00410; IG_like; 1,
SMART; SM00408; IGC2; 2,
Immunoglobulin domain; Cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no modified and this statement is not removed. Usage by and for commer entities requires a license agreement (See http://www.isb-sib.ch/annouentities requires a license agreement (See http://www.isb-sib.ch/annouentities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J. Neurosci.
                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                         CARBOHYL
                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYL
                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR003006; Ig_MHC.
InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M88710; AAA40859.1; -.
EMBL; M88711; AAA40860.1; -.
EMBL; M88709; AAA40858.1; -.
PIR; JC1239; JC1239.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ÷
                                                                                                                                                                                                                                                                                                                LIPID
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
173
                         165
                                                  128
                                                                             109
                                                                                                        79
                                                                                                                                   59
                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tities requires a license agreement (See http://www.isb-sib.ch/announce/send an email to license@isb-sib.ch).
                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR LOCATION: Attached to the membrane ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (S MAY BE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: CONTAINS 3 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. IGLON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INVOLVED IN CELL CONTACT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: BINDS OPIOIDS IN THE PRESENCE OF ACIDIC LIPIDS; PROBABLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
SVKEGQGFVSEDEYLE - - - - ISDIKRDQSGEYECSAL - NDVAAPDVRKVKITVNYPPYIS
                                                                                                        NDKWSIDPRVIILVN --- TPTQY ---
                                                                                                                                                             RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAG
                                                                                                                                                                                       RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---
                        SYY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----
                                                  VH----LIVQVPPQIMNISSDITVNEISSVTLLCLAIGRPE----
                                                                            LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 164
                                                                                                                                  ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Signal; Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of neurotrimin defines a new subfamily of differentially d neural cell adhesion molecules."; sci. 15:2141-2156(1995).
                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                     345 AA;
                                                                                                                                                                                                                                                                                                                                                                              323
50
150
150
237
237
157
157
244
44
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      322
                                                                                                                                                                                                                                                                     38067 MW;
                                                                                                                                                                                                                              6.2%;
                                                                                                                                                                                                                  35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             adhesion; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 splicing
                                                                                                                                                                                                                                                                                                                                        N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                              N-LINKED
                                                                                                                                                                                                                              Score 128; DB 1;
Pred. No. 0.0041;
                                                                                                                                                                                                                                                                                   SATTALLFIP (IN ISOFORM
                                                                                                                                                                                                                                                                                                  MGVCGYLFLPWKCLVVVSLRLLFLVPT
                                                                                                                                                                                                                                                                                                             GPI-ANCHOR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                          N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN IG-LIKE C2-TYPE DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REMOVED IN MATURE FORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BY SIMILARITY. OPIOID BINDING
                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                       POTENTIAL.
                                                                                                                                                                                                                                                                        A3181B0753F9658E
                                                                                                        ----SIMIQNVDVYDEGPYTCSVQTDNHPKTSR
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                 (GLCNAC.
                                                                                                                                                                                                                                                                                                                                      (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROTEIN/CELL ADHESION
                                                                                                                                                                                                                  110;
                                                                                                                                                                                                                                         Length 345;
                                                                                                                                                                                                                                                                        CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ne by a
(SHOWN
                                                                                                                                                                                                                  Indels
                                                    - PTVTWR - - -
                                                                                                                                                                                                                                                                                   2).
                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GPI-anchor;
                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GPI-anchor
HERE) AND
                                                                                                                                                                                                                                                                                                   Ÿ
                                                                                                                                                                                                                  70;
                                                                                                                                                                                                                                                                                                   MYHPAYWIVF
                         ĪR
                                                  Ë
                                                                                                                                                                                                               Gaps
                                                                                                                                                                                       58
                                                                                                                                                                                                                  17;
```

```
RESULT 9
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P43146;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                              Cancer Res. 54:3007-3010(1994).

-i- EUNCTION: IMPLICATED AS A TUMOR SUPPRESSOR GENE.

-i- SUBCELLULAR LOCATION: Type I membrane protein.

-i- TISSUE SPECIFICITY: FOUND IN AXONS OF THE CENTRAL AND PERIPHERAL NERVOUS SYSTEM AND IN DIFFERENTIATED CELL TYPES OF THE INTESTINE.

-i- DISEASE: COLORECTAL TUMORS THAT LOST THEIR CAPACITY TO DIFFERENTIATE INTO MUCUS PRODUCING CELLS UNIFORMLY LACK DCC EXPRESSION. INACTIVATION OF DCC DUE TO ALLELIC DELETION AND/OR POINT MUTATIONS MAY CAUSE BOTH LYMPHATIC AND HEMATOGENOUS METASTASIS OF OESOPHAGEAL SQUAMOUS CELL CARCINOMAS.

-i- SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                MEDITINE-94243823; PubMed=olovery.
Miyake S., Nagai K., Yoshino K., Oto M., Endo M., Iuasa ...
"Point mutations and allelic deletion of tumor suppressor
"Point mutations and allelic deletion as and their relative statements."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Identification of a chromosome colorectal cancers."; Science 247:49-56(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=90100559; PubMed=2294591; Fearon E.R., Cho K.R., Nigro J.M., Kern Ruppert J.M., Hamilton S.R., Preisinger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                          carcinomas
                                                                                                                                                                                                                                                                                                                                                                               Cho K.R., Oliner J.D., Simons J.W., Hedrick L.,
                                                                                                                                                                                                                                                                                                                                                                                                               GENE STRUCTURE,
                                                                                                                                                                                                                                                                                                                                                                                                                                         Cell 64:607-613(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oliner J.D., Kinzler K.W., "Scrambled exons.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nigro J.M., Cho K.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 107-472 FROM N.A. (SC MEDLINE=91121517; PubMed=1991322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 1-750 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumorigenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=95011532; PubMed=7926722; Hedrick L., Cho K.R., Fearon E.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumor suppressor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DCC_HUMAN
                           -!- SIMILARITY:
                                                                                                                                                                                                                                                                                             VARIANT CARCINOMA THR-168, AND VARIANT GLY-201
                                                                                                                                                                                                                                                                                                                            Genomics 19:525-531(1994).
                                                                                                                                                                                                                                                                                                                                                                   Preisinger A.C., Hedge P.,
                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=94245241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vogelstein B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The DCC gene product in cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vogelstein B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                       "The DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     216
                                                        SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KAKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLATGLDGVRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CPQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAGTML
    SWISS-PROT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dev. 8:1174-1183(1994)
                                                                                                                                                                                                                                                                                                                                                       gene: structural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                             CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAIN CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                             AND VARIANTS CARCINOMA HIS-1375
  entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                             PubMed=8188295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata;
Primates;
    is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fearon E.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DCC precursor (Colorectal cancer suppressor).
copyright.
                                                                                                                                                                                                                                                                                                                                                      analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vogelstein
                                                                                                                                                                                                                                                                                                                                                                   Silverman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SCRAMBELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             differentiation and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kern S
ein B.;
                                                                                                                                                                                                                                                                                                                                                      an G.A., Vogelstein and mutations in co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wu T.-C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1447
    ij
    is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.E., Ruppert J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EXONS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hominidae;
    produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kinzler K.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Simons
Thomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s,
                                                                                                                                                                                                                                                                                                                                                                                   Fearon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     altered
                                                                                                                                                                                                                                                                       Yuasa Y.;
                                                                                                                                                                                                                                         relation to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                         colorectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                colorectal
                                              DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                   E.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kinzler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                K.W.,
                                                                                                                                                                                                                                                         in
```

use by non-profit institutions as long modified and this statement is not removed.

ween the Swiss Institute of Bioinformatics and the EMBL outsue European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in infield and this extrement institutions.

EMBL outstation

n no way on

its

between the

10;

```
Ser a range and control of the contr
 Query Match
                                                                                                                                                                                                                                                                                                      DOMAIN
DISULFID
DISULFID
DISULFID
DISULFID
                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
DOMAIN
                                  SEQUENCE
                                                                                    CONFLICT
                                                                                                                       VARIANT
                                                                                                                                                      VARIANT
                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00014; ENTYPI
SMART; SM00060; FN3; 6.
SMART; SM00410; IG_like
SMART; SM00408; IGC2; 3
                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Repeat; Anti-oncogene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A40098; A40098.
A38442; A38442.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A54100; A54100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M63702;
M63718;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M63696;
M63700;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M32286;
M32288;
M32290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF00047; 19; 4.
S; PR00014; FNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P56276;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M32292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HGNC:2701; DCC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; IPR003961; FN_III.
; IPR003962; EnIII_repeat.
; IPR003065; ig_mHC.
; IPR003606; ig_mLe.
; IPR003600; ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26
26
1098
                                    138
233
421
1447
                                                                                                                     1375
                                                                                                                                                                                                                                      722
840
941
61
161
161
261
352
94
299
318
478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; AAA52179.1;
; AAA52180.1;
; AAA52181.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; AAA52174.1; -.
; AAA52175.1; ALT_SEQ.
; AAA52176.1; -.
; AAA52177.1; -.
; AAA52177.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L; fn3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAA53735.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; IG_like; 2.
; IGc2; 3.
                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1447
1097
1122
                                                                                                                     1375
                                                                                                                                                                                     1042
1117
212
310
400
94
299
318
478
628
628
702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                  158456
 6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disease
                                                                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 2.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
                                                                                                                                                                                                                                BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
N-LINKED (GLCNAC.
                                  WW;
                                                /FTIG=VAR_003911.
MISSING (IN REF. 3
MISSING (IN REF. 3
MISSING (IN REF. 3
                                                                                                                   /FTId=VAR_003910
P -> H 'TY'
                                                                                                                                                                                     N-LINKED
N-LINKED
M -> T (I
 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domain; Transmembrane;
                                                                                                                                                                    /FTId=VAR_003909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TUMOR SUPPRESSOR PROTEIN DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mutation; Polymorphism
                               SING (IN REF. 3).
SING (IN REF. 3).
SING (IN REF. 3).
4A8612766ED0471F CRC64;
 128;
                                                                                                                                                                                     (IN OESOPHAGEAL
                                                                                                                                                                                                   (GLCNAC.
 DB
                                                                                                                  COLORECTAL CARCINOMA)
 1;
Length 1447;
                                                                                                                                                                                                                                                  (POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                   (POTENTIAL). (POTENTIAL). (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>*</u>ων⊢
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal;
                                                                                                                                                                                     CARCINOMA)
```

```
ALD ARREST REPORT OF THE PROPERTY OF THE PROPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KMLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Myosin light chain kinase, smooth muscle and non-muscle isozymes
(EC 27.1.117) (MLCK) [Contains: Telokin (Kinase related protein)
                        cloning,
                                              "The human myosin light chain kinase
                                                                    Potier M.-C., Chelot E., Pekarsky Turnell W.G.;
                                                                                                                   TISSUE=Hippocampus;
MEDLINE=96121365; PubMed=8575746;
                                                                                                                                                 TISSUE-H:
                                                                                                                                                                    SEQUENCE OF 923-1914 FROM N.A.
                                                                                                                                                                                                                      Submitted
                                                                                                                                                                                                                                              Birukov
                                                                                                                                                                                                                                                                  REVISIONS
                                                                                                                                                                                                                                                                                                              Lazar V.L., Garcia J.G.N.;
"A single human myosin light chain
Genomics 57:256-267(1999).
                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Umbilical vein;
MEDLINE=99216419; PubMed=10198165;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REVISIONS.
Birukov K.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Verin A.D.;
"Myosin light chain kinase in endothelium: molecular cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Garcia J.G.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KMLS_HUMAN STANDARD;
Q15746; Q14844; Q16794;
Q9UIT9;
                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Am.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Umbilical vein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=97304466; PubMed=9160829;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MYLK OR MLCK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    regulation."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΑP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΤÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGSGNEV-----IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ELTYLYPPWFLNHPSNLYAYESMDIEFECTYS-GKPYPTYNWMKNGDYVIPSDYFQIVGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VI---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----VLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Respir.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               234
sequencing, expression, 29:562-570(1995).
                                                                                                                                                                                                                 (ISOFORM 2).

G., Garcia J.G.N.;

(MAR-2000) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              G., Garcia
(MAR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa; Chordata; C
metazoa; Primates; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cell Mol. Biol. 16:489-494(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lazar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                               (ISOFORMS 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to the I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٧.٢.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endothelial cells;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    095796; 095797; 095798; 095799; Q9UBG5,
                                                                                                                                                                                                                                            .
.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gilbert-Mcclain L.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33;
                                                                                                                                                                                                                   EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 0.024;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                               3A;
                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                             ۲,
                                                                                                                                                                                                                                                                                                                                       kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                  3В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1914 AA
                                            (MLCK) from hippocampus:
                        localization to
                                                                                             Gardiner K., Rossier J.,
                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99;
                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                    (MLCK; MYLK).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallagher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                   3qcen-q21.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          278
```

```
EMBL;
                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.

-i- FUNCTION: CALCIUM/CALMODULIN-DEPENDENT ENZYME RESPONSIBLE FOR SMOOTH MUSCLE CONTRACTION VIA PHOSPHORYLATION OF A SPECIFIC SERINE IN THE N-TERMINUS OF MYOSIN LIGHT CHAINS (MLC), AN EVENT THAT FACILITATES MYOSIN INTERACTION WITH ACTIL FILAMENTS. CENTRAL DETERMINANT IN THE DEVELOPMENT OF VASCULAR PERMEABILITY AND TISSUE EDEMA FORMATION. IN THE NERVOUS SYSTEM IT HAS BEEN SHOWN TO CONTROL THE GROWTH INITIATION OF ASTROCYTIC PROCESSES IN CULTURE AND TO PARTICIPATE IN TRANSMITTER RELEASE AT SYNAPSES FORMED BETWEEN CULTURED SYMPATHETIC GANGLION CELLS. CRITICAL PARTICIPANT IN SIGNALING SEQUENCES THAT RESULT IN FIBROBLAST APOPTOSIS.

-I- CATALYTIC ACTIVITY: ATP + [myosin light-chain] = ADP + [myosin light-chain]
                                                                                                                                                                                                                                                                                                                                                                                                between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watterson D.M., Schavocky J.P., Guo L., Weiss C., Chlenski A., Shrinsky V.P., Van Eldik L.J., Haiech J.;
"Analysis of the kinase-related protein gene found at human chromosome 3q21 in a multi-gene cluster: organization, expression, alternative splicing and polymorphic marker.":
                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1456-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        splicing and polymorphic marker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Lung, and Placenta; MEDLINE=20007838; PubMed=10536370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [6] SEQUENCE OF 1614-1914 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3B, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPILCING.

TISSUE SPECIFICITY: SMOOTH MUSCLE AND NON-MUSCLE ISOZYMES ARE
EXPRESSED IN A WIDE VARIETY OF ADULT AND FETAL TISSUES AND IN
CULTURED ENDOTHELIUM WITH QUALITATIVE EXPRESSION APPEARING TO B
NEITHER TISSUE- NOR DEVELOPMENT-SPECIFIC. NON-MUSCLE ISOFORM 2
THE DOMLANAT SPLICE VARIANT EXPRESSED IN VARIOUS TISSUES. TELOK
HAS BEEN FOUND IN A WIDE VARIETY OF ADULT AND FETAL TISSUES.
FTM: MLCK IS PROBABLY DOWN-REGULATED BY PHOSPHORYLATION.
SIMILARITY: BELONGS TO THE SER/THR FAMILY OF PROTEIN KINASES.
SIMILARITY: CONTAINS 1 FIBRONECTIN TYPE III-LIKE DOMAIN.
SIMILARITY: CONTAINS 1 FIBRONECTIN TYPE III-LIKE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      light-chain] phosphate.
SUBUNIT: TELOKIN BINDS CALMODULIN.
ALTERNATIVE PRODUCTS: AT LEAST 3 ISOFORMS; A NON-MUSCLE FORM (THE LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALTERNATIVE PRODUCTS: AT LEAST 6 ISOFORMS; 1 (SHOWN HERE), 3B, 4 AND DEL-1790; ARE PRODUCED BY ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LONGEST FORM), A SMOOTH-MUSCLE FORM AND TELOKIN (A C-TERMINAL SECTION WITH NO CATALYTIC ACTIVITY); ARE PRODUCED BY ALTERNATIVE
600922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a collaboration
                                X90870; CAA62378.1;
Q63450; 1A06.
                                                                                                                                                                                                                                                                                                                           AF069602;
                                                                                                                                                                                                                                                                                                                                                                 U48959; AAC18423.2;
                                                                                                                                                                                                                                                                     CAA59685
                                                                                                                                                                                                                           ; AAD15924.1; -
CAA59685.1; -
; AAD51380.1; -
; AAD51380.1; J
                                                                                                                                                                                                                                                                             ; AAD15921.2; -.; AAD15922.1; -.; AAD15923.1; -.; AAD15924.1; -.
                                                                                                                              AAD51380
AAD51380
AAD54018
                                                                                                                                                                                       AAD51380
AAD51380
                                                                      AAD51381.1;
                                                                                                              AAD51381
                                                                                                                                                                                                                                                                                                                                           AAD15921.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75:481-491(1999).
                                                                                                                                              JOINED.
JOINED.
JOINED.
JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELOKIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BΕ
```

```
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                             NP_BIND
BINDING
ACT_SITE
DOMAIN
                                                                                                                                                                                               REPEAT
REPEAT
REPEAT
VARSPLIC
                                      CONFLICT
                                                                                                                                                                                                                                            REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.

PROSITE; PS00108; PROTEIN_KINASE_ST; 1.

PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.

Transferase; Serine/threonine-protein kinase; Calmodu ATP-binding; Phosphorylation; Immunoglobulin domain;
                                                                                                      CONFLICT
                                                                                                                                                                                                                                                                                                            DOMAIN
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 8.
SMART; SM00220; S_TKC; 1.
                                                        CONFLICT
                                                                   CONFLICT
                                                                            CONFLICT
                                                                                     CONFLICT
                                                                                             CONFLICT
                                                                                                                                                   VARSPLIC
                                                                                                                                                                     VARSPLIC
                                                                                                                VARSPLIC
                                                                                                                        VARSPLIC
                                                                                                                                                                                                                                     REPEAT
                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                                                                                                 REPEAT
                                                                                                                                                                                                                                                                                          REPEAT
                                                                                                                                                                                                                                                                                                    REPEAT
                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                     INIT_MET
                                                                                                                                                                                                                                                                                                                                                                                                                         INIT_MET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alternative initiation; Alternative splicing CHAIN 1 1914 MYOSIN LIGHT CHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF00041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; PD000001; Euk_pkinase;
sM00060; FN3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F00069; pkinase; 1. PR00014; FNTYPEIII.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR000719;
IPR003961;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR002290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003962;
                                                                                                                                                                     1433
                                                                                                                                                                                                1493
11585
1914
998
8953
923
951
1063
1003
11003
11027
11027
11039
11063
                                                                                                                                                                                                                                                                                                                                                         1761
1413
1719
1774
1774
1891
1478
                                      1705
1790
933
963
1022
1050
1162
1210
1280
                                                                                                                                                   1546
                                                                                                                                                                    1439
                                                                                                                                                                                                                                                                                                                                                                                                                         1914
923
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ig_c2.
Ig_like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ser_thr_pkinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FnIII_repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euk_pkinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FN_III.
 4 T F
                                      ▼ E L 7
                                                                                            A <- S
                           AAD15924).
                                                                           KPM -> EAH
                                                                                                              MISSING (IN ISOFORM DEL-1790).
                                                                                                                                                  ISOFORM 3B AND ISOFORM 4). GKFGQVFRLVEKKTRKVWAGKFFKAYSAKEXENIRQEISIM
                                                                                                                                                                   VSGIPKPEVAWFLEGTPVRRQEGSIFVYEDAGSHYLCLLKA
RTRDSGTYSCTASNAQGQVSCSWTLQVER -> G (IN
ISOFORM 2 AND ISOFORM 3B)
DEVEVSD -> MKWRCQT (IN ISOFORM 3A,
                                                                                                                                                                                                                                                    I-5 (INCOMPLETE).
6 X 12 AA APPROXIMATE TANDEM REPEATS.
II-1 (INCOMPLETE).
                                                                                                                                                                                                                                                                                                                                                       CALMODULIN-BINDING.
IG-LIKE C2-TYPE DOMAIN.
ATP (BY SIMILARITY).
                                                                                                                                         NCLHHPKLVQCVDAFEEKANIVMVLEIVSGGEL
                                                                                                                                                                                                                                                                                                                                                 ATP
                                                                                                                                                                                                                                                                                                                                                                                                    MUSCLE ISOZYME. FOR TELOKIN.
                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                     PROTEIN KINASE
                                                                                                                                                                                                                                                                                                                                                                                            FIBRONECTIN TYPE-III
                                                                                                                                                                                                                                                                                                                                                                                                                        FOR MYOSIN LIGHT CHAIN KINASE, SMOOTH-
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MYOSIN LIGHT CHAIN KINASE, SMOOTH-MUSCLE
                                                                                                                                (IN ISOFORM 4)
                                                                                   ;
                                                                                                                                                                                                                                                                                                                     x 28
                                                                                 > M (IN REF. 5).
> P (IN REF. 3; A
> A (IN REF. 5).
 တလလ
                                                        ъг
                                                                                                                                                                                                                                                                                                                                               (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                     AA APPROXIMATE TANDEM REPEATS
                                             H (IN REF. 5).
N REF. 3; AAD1
N REF. 5).
N REF. 3; AAD1
REF.
REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHAIN KINASE, NON-MUSCLE
                                      5).
3; AAD15922/AAD15923)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Calmodulin-binding;
                                      AAD15922/AAD15923/
                                                                 AAD15922/AAD15923).
                                                                                           AAD15922)
                                                                                                                      AND ISOFORM 3B)
```

```
RESULT
PTK7_HC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                  HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONFLICT
CONFLICT
CONFLICT
CONFLICT
SEQUENCE. E.V...
TISSUE-Fibroblast;
MEDLINE-97037064; PubMed-8882711;
MEDLINE-97037064; PubMed-8882711;
Park S.-K., Lee H.-S., Lee S.-T.;
Park S.-K., Lee H.-S., Lee S.-T.;
                                                                                                                                                                                                                                                                     PTK7_HUMAN STANDARD; PRT; 1070 AA Q13308; Q13417; 30-MAY-2000 (Rel. 39, Created) 30-MAY-2000 (Rel. 39, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                Mossie
"Colon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                        TISSUE-Colon carcinoma, and Plac
MEDLINE=96074849; PubMed=7478540
Mossie K., Jallal B., Alves F.,
                                                                                                                                                                                                PTK7 OR CCK4. (Human). Homo sapiens (Human). Euteryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                   tyrosine
                                                                                                                                                                                                                                                        Tyrosine-protein kinase-like
                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                 394
                                                                                                                                                                                                                                                                                                                                                                                                                             337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24 PQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGG
                                                                                                                                                                                                                                                                                                                                                                                 SVV
                                                                                                                                                                                                                                                                                                                                                                                                       KVS
                                                                                                                                                                                                                                                                                                                                                                                                                             VLQKTSSSITLQAARVQ---PEPRAPGLGVLSPSGEERKRPAPPRPATFPTRQPGLGSQD 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQR----PPRPASHPQASFNLASPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNEN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTVIRCPQDTGGGI-----NIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSA-----TVN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FSASAVETRPSIWGECPPKFATKLGRVVVKEGQMGRFSCKITGRPQ-----PQVTWLKGN 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RGTFSLVIHAVHEEDRGKYTCEATNG--SGARQVTVELTVEGSFAKQLGQPVVSKTLGDR 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NFTSEMITHNVEPSDSGNIRCSLQNSRLHGSAYLTVQV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRNLCIKEGATAKFEGRV-RGYPEPQVTWH-----RNGQPITSGGRFL---LDCGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----EAAAKSKNCSSPQRGGSPPWAANSQPQPP-RESKLESCKDSPRTAPQTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RSFVRETKATNSDVRKEVTNVISKESKLDSL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VPLQPSARVSVSEKNGMQ-VLEIHGVNQDDVGVYTCLVVNGSGKASMSAELSIQGLDSAN
                                                                                                                carcinoma kinase-4 defines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                 396
                                                                                        kinase family.";
11:2179-2184(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1478
1511
1563
1609
1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -PSV-----NLVVAENE----PCEVTCLPSHWTRLPDISWELG-
                                                                                                                                       PubMed=7478540,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1478
1511
1563
1609
1639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.2%;
                                                                                                                                                 and Placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 128; DB 1;
Pred. No. 0.034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       eg o ≯ H s ≺
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAD15924)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 otation update)
precursor (Colon carcinoma kinase-4)
                                                                                                                Sures I.,
les a new si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                       1070
                                                                                                                 subclass
                                                                                                                Plowman G.D.,
ubclass of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
.
.
.
.
.
.
.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAD15922/AAD15923).
                   cDNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAD15922/AAD15923/
                                                                                                                Ullrich A.; receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SGYNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MGEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                      378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19;
                      use by non-profit institutions as long a modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                     DOMAIN
TRANSMEM
                                                                                                                                                                                                              SMART;
SMART;
SMART;
                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Biochem.
[3]
                      DOMAIN
DOMAIN
                                                                                                                                                             PRINTS; PRO0109; TYRKINASE.
ProDom; PD000001; Euk_pkinase;
SMART; SM00410; IG_like; 2.
                                                                                                                                                                                                                                                                                                                                                                                             HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chick KLG
                                            DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                                                                                                                                                                                                                                     MIM; 601890;
                                                                                                                                                                                                                                                                                                                                                                                   Genew;
                                                                                DOMAIN
                                                                                                                             CHAIN
                                                                                                                                          SIGNAL
                                                                                                                                                                                                                                                                                              Interpro; IPR001245;
                                                                                                                                                                                                                                                                                                           InterPro; IPR003600;
InterPro; IPR002011;
                                                                   DOMAIN
                                                                                            DOMAIN
                                                                                                                                                     Immunoglobulin
                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003006; InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000719;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Type I membrane protein.
TISSUE SPECIFICITY: HIGHLY EXPRESSED IN LUNG, LIVER, PANCREAS,
KIDNEY, PLACENTA AND MELANOCYTES. WEAKLY EXPRESSED IN THYROID
GLAND, OVARY, BRAIN, HEART AND SKELETAL MUSCLE. ALSO EXPRESSED
ERYTHROLEUKEMIA CELLS. BUT NOT EXPRESSED IN COLON.
SIMILARITY: BELONGS TO THE TYR FAMILY OF PROTEIN KINASES. INSUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY: CONTAINS 7 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROGRESSION MARKER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RECEPTOR SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                            AF447175;
P08631; 12
                                                                                                                                                                                                                                                                                                                                                                                                                   AF447167;
AF447170;
AF447171;
AF447171;
AF447173;
AF447173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AF447158;
AF447162;
                                                                                                                                                                                                                                                                        PF00047; ig; 7.
PF00069; pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF447176;
AF447157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U33635; AAA87565.1;
                                                                                                                                                                                                              SM00408; IGC2; 5.
SM00219; TYTKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                 HGNC:9618; PTK7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC50484.2;
                                                                                                                                                                                                                                                                                                                                                                                            LAD5
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAL39062.1;
AAL39062.1;
AAL39062.1;
AAL39062.1;
                                                                                                                                                      domain;
                                                                                                                                                                                                                                                                                                                                                                                                         AAL39062.1;
                                                                                                                                                                                                                                                                                                                                                                                                                              AAL39062
                                                                                                                                                                                                                                                                                                                                                                                                                    AAL39062
                                                                                                                                                                                                                                                                                                                                                                                                                                            AAL39062.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAL39062.1;
                       30
1070
704
725
1070
108
208
208
308
308
398
488
                                                                                                                                                                                                                                                                                                          Ig_c2.
Ig_like.
RTKinaseII.
                                                                                                                                                                                                                                                                                               Tyr_pkinase
                                                                                                                                                                                                                                                                                                                                                          Euk_pkinase
                                                                                                                                                                                                                                                                                                                                             IG_MHC.
                                                                                                                                                     Repeat
                                                                                                                                                                                                                                                                                                                                                                                                        JOINED.
                    POTENTIAL.
CYTOPLASMIC (POTE
IG-LIKE C2-TYPE I
                                                                                                                  EXTRACELLULAR (POTENTIAL)
                                                                                                                             TYROSINE-PROTEIN KINASE-LIKE 7.
                                                                                                                                           POTENTIAL.
                                 TYPE DOMAIN 1
TYPE DOMAIN 1
TYPE DOMAIN 2
TYPE DOMAIN 3
TYPE DOMAIN 3
                                                                                                                                                                 Cell
```

밁 Qy

σσ+ωN+

adhesion;

Š

В

Qy 밁 Ş

맑

```
SEQUENCE FROM N.A., AND REVISION TO 834.

Lee S.-T., Park S.-K., Lee H.-S., Ji A.R., Jung J.W.;

Submitted (NOV-2001) to the EMBL/GenBank/DDBJ databases.

SUBMITTION: MAY FUNCTION AS A CELL ADHESION MOLECULE. LACKS PROBABLY

THE CATALYTIC ACTIVITY OF TYROSINE KINASE. MAY BE CONNECTED TO THE

PATHOPHYSIOLOGY OF COLON CARCINOMAS AND/OR MAY REPRESENT A TUMOR
                                                                                                                                                                                                                                                                                                                                                                                                      receptor protein tyrosine kinase-like molecule closely related chick KLG.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ç
```

H

This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restricted the companies of the control of the c (See http://www.isb-sib.ch/announce, There are no rest Usage restrictions and EMBL outstation is a collaboration -MBL outstation for in

밁

20

δÃ

밁

망 δõ ġ

밁

commercial

```
PGBM_H

ID PGBM_H

AC P98160

DT 01-OCT

DT 01-OCT

DT 15-JUN

DE Baseme

DE POTES

GN HSPG2.

OS HOMO S

OC EUKARY

OC MAMMMAI

OX NCBI_T

RN [1]

RP SEQUEN

RX MEDLIN

RA KAILUM

RA KAILUM

RA KAILUM

RT 10W de

RT 10W de

RT 10W de

RT 10W de

RT 10W de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                     PGBM_HUMAN STANDARW;
P98160; Q16287;
01-CCT-1996 (Rel. 34, Created)
01-CCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Basement membrane-specific heparan sulfate proteoglycan core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONFLICT
CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
DISULFID
"Human basement membrane heparan sulfate proteoglycan core protein: 467-kb protein containing multiple domains resembling elements of the low density lipoprotein receptor, laminin, neural cell adhesion molecules, and epidermal growth factor.";

J. Cell Biol. 116:559-571(1992).
                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                     SEQUENCE FROM N.A.
MEDLINE=92112994; PubMed=1730768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
                                                                                        Kallunki P.,
                                                                                                                                                            NCBI_TaxID=9606
                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                               379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       218 SIADESFARVVLAPQDVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRR 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 AVGSGSGNEVIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRFTSQRYDQGGNFTSEMITHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATVFA-----NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLF
                                                                                                                                                                                                                                                                                                                                                                                                                                          ANIAESDAGVYTCHAA--NLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTPOSN-GTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EPRVFTAGSEE --- RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPSVNLVVAENEPCEVTCLPSHWTRLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSIL 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                      Tryggvason K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  671
1066
1001
2000
3011
3911
481
1116
664
1116
1116
1114
214
214
405
5567
646
9269
969
                                                                                                                                                                              Primates;
                                                                                                                                                                                           Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6.0%;
24.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IG-LIKE C2-TYPE DOM/
PROTEIN KINASE; INAC
BY SIMILARITY.
BY SIMILA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 0.07
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               47CDF25B8E3698A5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INACTIVE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AND 3).

AND 3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36;
                                                     of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
EMBL;
EMBL;
EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                               This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94052171; PubMed=8234307; Cohen I.R., Graessel S., Murdoch A.D., "Structural characterization of the co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Cloning of human heparan sulfate proteoglycan coassignment of the gene (HSPG2) to 1p36.1-->p35 are a BamHI restriction fragment length polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Skin, and Colon;

MEDLINE=92235084; PubMed=1569102;

Murdoch A.D., Dodge G.R., Cohen I., Tuan R.S., Iozzo R.V.;

Murdoch A.D., Dodge G.R., Cohen I., Tuan R.S., Iozzo R.V.;

"Primary structure of the human heparan sulfate proteoglycan from basement membrane (HSPG2/perlecan). A chimeric molecule with multiple domains homologous to the low density lipoprotein receptor, laminin,
                                                                                                                                                        or send an
                                                                                                                                                                       entities
                                                                                                                                                                                           modified
                                                                                                                                                                                                                                              between
                                                                                                                                                                                                                                                                                                                                                                                                         <del>.</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92120660;
Kallunki P., Eddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=Fibrosarcoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 892-1398 FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cloning,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=91365376; PubMed=1679749;
Dodge G.R., Kovalszky I., Chu M.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1018-1472 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neural cell adhesion molecules, and J. Biol. Chem. 267:8544-8557(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tryggvason
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dodge G.R., Kovaiszk
Yi H.F., Iozzo R.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Colon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-21 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genomics 11:389-396(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ts promoter."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Heparan sulfate proteoglycan of human colon: parcloning, cellular expression, and mapping of the short arm of human chromosome 1.";
                                                                                                                                                                                                                                                                                         PTM: CONTAINS THREE HEPARAN SULFATE CHAINS AS WELL AS N-LINK AND O-LINKED OLIGOSACCHARIDES.

SIMILARITY: CONTAINS 4 LDL-RECEPTOR CLASS A DOMAINS.

SIMILARITY: CONTAINS 10.5 LAMININ EGF-LIKE DOMAINS.

SIMILARITY: CONTAINS 3 LAMININ DOMAINS IV.

SIMILARITY: CONTAINS 22 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.

SIMILARITY: CONTAINS 3 LAMININ G-LIKE DOMAINS.

SIMILARITY: CONTAINS 4 EGF-LIKE DOMAINS.

SIMILARITY: CONTAINS 1 SEA DOMAINS.
                                                                                                                                                                                                                          European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Extracellular.
TISSUE SPECIFICITY: FOUND IN THE BASEMENT MEMBRANES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              properties. It serves as an attachment substrate for cells. SUBUNIT: Purified perlecan has a strong tendency to aggregate i dimers or stellate structures. It interacts with other basement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl. Acad. Sci. U.S.A. 90:10404-10408(1993). FUNCTION: This protein is an integral component of basement membranes. It is responsible for the fixed negative electrostatic charge and is involved in the charge-selective ultrafiltration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              membrane components such as laminin, prolargin and collagen type
                             X62515;
M85289;
M64283;
S76436;
L22078;
P00740;
                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                          requires
                                                                                                                                                                                         non-profit institutions as long a and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10:673-680(1991).
                                                                                                                                                          email to license@isb-sib.ch).
                                                                                    CAA44373.1;
AAA52700.1;
AAA52699.1;
                                                                  AAB21121
                P98160;
                                  1EDM.
                                                 NOT_ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=1685141;
R.L., Byers M.G.,
 HSPG2
                                                                                                                                                                          license agreement
                                                                                                                                                                                                          ormatics Institute. There are no rest institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and epidermal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kestila M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hassell J.R.,
                                                                                                                                                                        (See http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Iozzo R.V.;
mplete human
                                                                                                                                                                                         Usage by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and identification
sm.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene (HSPG2) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          McBride
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      perlecan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor.";
                                                                                                                                                                                                                          restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         molecular
                                                                                                                                                                                           and
                                                                                                                                                                                                                                              EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O.W.,
                                                                                                                                                                                                                                                           a collaboration
                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                        ch/announce,
                                                                                                                                                                                                                                            outstation
                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
```

Ş

밁

ρy

δÃ

밁

g ņ

```
ProDom; PD003031; Laminin_B; 3.

SMART; SM00018); EGF_Lam; 6.

SMART; SM00018); EGF_Like; 8.

SMART; SM00019; EDLA; 4.

SMART; SM00240; IGC2; 22.

SMART; SM00282; LamG; 3.

SMART; SM00282; LamG; 3.

SMART; SM00282; EGF_1; 9.

PROSITE; PS01186; EGF_2; 5.

PROSITE; PS01248; LAMININ_TYPE_EGF; 11

PROSITE; PS0125; LAM_G_DOMAIN; 3.

PROSITE; PS0125; LAM_G_DOMAIN; 3.

PROSITE; PS01209; LDLRA_1; 4.

PROSITE; PS01204; EGF, 1.

PROSITE; PS01204; EGF, 1.

PROSITE; PS01204; EGF, 1.

PROSITE; PS0068; LDLRA_2; 4.

PROSITE; PS0024; SEA; 1.

PROSITE; PS0024; SEA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
InterPro;
Pfam; PPO(
Pfam; PFO(
Pfam; PFO)
Pfam; PFO
Pfam; PFO
Pfam; PFO
Pfam; PFO
Pfam; PFO
Pfam; PFO
  DOMAIN
DO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Extracellular SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rero; IPR001438; E

rero; IPR003006; I

rero; IPR003598; I

rero; IPR002172; I

rero; IPR002049; I

rero; IPR000082; S

pF00008; IPR000082; S

pF00008; IPR000082; S

pF000052; Iaminir

pF00052; Iaminir

pF00053; Iaminir

pF00057; Idl_Irec

pF00057; Idl_Irec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Basement membrane; Proteoglycan; Repeat; Glycoprotein; sulfate; Laminin EGF-like domain; Immunoglobulin domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PR00010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR000561;
    r matrix;
1 2:
22 439:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; EGF; 4.
; 1g; 22.
; laminin_B; 3.
; laminin_EGF; 7.
; laminin_G; 3.
; ldl_recept_a; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGFBLOOD.
    EGF-like.
EGF_I.
EGF_II.
I9_MHC.
I9_c2.
LDL_recept_A.
Laminin_B.
Laminin_B.
Laminin_G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEA_domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGF-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LDL-RECEPTOR CLASS A 1.
LDL-RECEPTOR CLASS A 2.
LDL-RECEPTOR CLASS A 3.
LDL-RECEPTOR CLASS A 4.
IG-LIKE C2-TYPE DOMAIN 1.
LAMININ EGF-LIKE 1 (N-TEML
LAMININ EGF-LIKE 1 (C-TEML
LAMININ EGF-LIKE 1 (C-TEML
LAMININ EGF-LIKE 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
  IGAMININ
LAMININ
LAMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TO COMMAIN.

TO COMMAIN.

TO COMMAIN.

SULFATE PROTEOGLYCAN CORE PROTEIN.
IN EGF-LIKE 1 (N-TERMINAL).
IN DOMAIN IV 1 (DOMAIN III A)
IN EGF-LIKE 2
IN EGF-LIKE 4 (INCOMPLETE).
IN EGF-LIKE 5 (N-TERMINAL).
IN EGF-LIKE 5 (N-TERMINAL).
IN EGF-LIKE 5 (N-TERMINAL).
IN DOMAIN IV 2 (DOMAIN III B)
IN EGF-LIKE 6.
IN EGF-LIKE 7.
IN EGF-LIKE 9 (N-TERMINAL).
IN EGF-LIKE 9 (N-TERMINAL).
IN EGF-LIKE 9 (N-TERMINAL).
IN EGF-LIKE 10.
IN EGF-LIKE 10.
IN EGF-LIKE 11.
IN EGF-LIKE 11.
IN EGF-LIKE 11.
IN EGF-LIKE 11.
IN EGF-LIKE 10.
IN EGF-LIKE 11.
IN EGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.
                                                                                                                                                                                                                                                                                       <u>c</u>
                                                                                                                                                                                                                                                                                                                                                                                                                      В).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A).
SMP_COTJA
ID SMP_COTJA
AC Q92154;
DT 15-JUL-1998 (F
DT 15-JUL-1998 (F
DT 15-JUL-1998 (F
DT 15-JUN-2002 (F
DE Schwann cell m
GN SMP.
OS Coturnix cotum
OC Eukaryota; Met
OC Archosauria; F
OC Coturnix.
OX NCBI_TaxID=938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ********************************
                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOMAIN
DO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                               3163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3069
                                                                                          Coturnix coturnix
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   φ
                                                                                                                                                                                                                                                                                                                                                      --DTG
                                                                                                                                                                                                                                                                                                                                                                                                 PODTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NSRLHGSAYLTVQVMGELFI----PSVNL-VVAENEPCEVTCLPSHWTRLPDISWEL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YGLMDSH-----TVLQISSAKPSDAGTYVCLAQNALGTAQKQVEVIV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NLSVHGPPTVSVLPEGPVWVKVGKAVTLECVSAGEPRS----SARWTRISSTPAKLEQRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VHIS--PNGSIIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GLLVSHSSYYEVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 25.3
52; Conservative
                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2632
2729
2729
2927
3024
3114
32114
33401
34911
38466
38866
38866
38866
38866
38866
38866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4301
                                                                                                                            (Rel. 36, Created)
(Rel. 36, Last sequence up
(Rel. 41, Last annotation
l myelin protein precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199
206
219
285
292
304
3325
                                                 Aves;
                                                                                                                                                                                                                                                STANDARD;
                                               japonica (Japanese quail).
a; Chordata; Craniata; Vertebrata;
; Neognathae; Galliformes; Phasiani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212
225
234
297
310
319
337
350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IG-LIKE C2-TYPE DOMAIN 12.
IG-LIKE C2-TYPE DOMAIN 13.
IG-LIKE C2-TYPE DOMAIN 14.
IG-LIKE C2-TYPE DOMAIN 15.
IG-LIKE C2-TYPE DOMAIN 16.
IG-LIKE C2-TYPE DOMAIN 16.
IG-LIKE C2-TYPE DOMAIN 19.
IG-LIKE C2-TYPE DOMAIN 19.
IG-LIKE C2-TYPE DOMAIN 20.
IG-LIKE C2-TYPE DOMAIN 21.
IG-LIKE C2-TYPE DOMAIN 21.
IG-LIKE C2-TYPE DOMAIN 22.
LAMININ G-LIKE 1.
EGF-LIKE 2.
LAMININ G-LIKE 1.
EGF-LIKE 3.
EGF-LIKE 3.
EGF-LIKE 3.
HEPARAN SULFATE (POTENTIAL).
HEPARAN SULFATE (POTENTIAL).
HEPARAN SULFATE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 122.5;
Pred. No. 0.26
28; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
MEDIATES MOTOR
                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----IVGTRPSNHGTYRCVASNAYGVAQSVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122.5;
No. 0.2
                                                                                                                                                        update)
on update)
                                                                                                                                                                                                                                                620
                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NEURON ATTACHMENT
                                                 Phasianidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                      Euteleostomi;
                                                 Phasiahinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3068
                                                                                                                                                                                                                                                                                                                                                                                                                                               3204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
```

216

157

12;

```
δÔ
                                             В
                                                                                  QΥ
                                                                                                                           В
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dulac C., Tropak M.B., cam
Roder J., le Douarin N.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART; SM00410; IG_like; 1.
SMART; SM00408; IGC2; 2.
Myelln; Glycoprotein; Cell adhesion; Transmembrane; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Molecular characterization of the Schwann cell myelin protein, structural similarities within the immunoglobulin superfamily."
                                                                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; S83711; AAB21466.1; -. HSSP; P56276; 1TLK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00047; ig; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR003006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neuron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92153423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A., AND SEQUENCE OF 18-28; 120-132; 135-157 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR003600;
                                               280
                                                                                                                               239
128 VN--LVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAV---SIL
                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REMAINS EXPRESSED BY CULTURED SCHWANN CELLS.
SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY.
SIMILARITY: CONTAINS 1 IMMUNOGLOBULIN-LIKE V-TYPE DOMAIN.
SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NONMYELINATING SCHWANN CELLS AND OLIGODENDROCYTES.

DEVELOPMENTAL STAGE: FIRST SYNTHESIZED AT EMBRYONIC DAY 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE SPECIFICITY: EXCLUSIVELY EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on 8:323-334(1992).
SUBCELLULAR LOCATION: Type I
                                                                       TNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPS
                                                                                                                                                                PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTV-SQGWKLIMWALSDMVVLSVRPMEPII 67
                                                                                                                             PQVVGLWGPTEVVE---
                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                           405
449
620
                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18
517
537
                                         ·REEPGRNL--RLLLSNVGPDDGGSFSCVAENRHGRHNRSLQLRVAYAPRAPV
                                                                                                                                                                                                                                                                                               ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=1739462;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            516
516
520
520
106
223
311
398
495
164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ig_c2.
Ig_like.
                                                                                                                                                                                                                                                                                                 66943 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ig_MHC.
                                                                                                                                                                                                                                   5.7%;
21.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cameron-Curry P.,
                                                                                                                                                                                                               33;
                                                                                                                                                                                                                                                                                                            IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
BY SIMILARITY.

                                                                                                                             GSDVELGCEAEGRPAPLISWFRGSEVL - -
                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                                   Score 118.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EXTRACELLULAR (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SCHWANN CELL MYELIN PROTEIN
                                                                                                                                                                                                                                                                                               004B3EC7EDC18FBA
                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                membrane protein.
ELY EXPRESSED BY MYELINATING
                                                                                                                                                                                                                                                                                                          D (GLCNAC. . . )
D (GLCNAC. . . )
CGLCNAC. . . )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 There are no restrictions ng as its content is in
                                                                                                                                                                                                                                   .049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rossier J., Marshak D.R.,
                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Usage
                                                                                                                                                                                                             ; 88
                                                                                                                                                                                                                                                                                               CRC64;
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                    Length 620;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γď
                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                             87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           녆
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on
                                                                                                                                                                                                             12;
```

```
Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
TRANSMEM
DOMAIN
DOMAIN
                                              NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         090610;
16-0CT-2001 (Rel. 40, Created)
16-0CT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHICK
                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entities requires a license agreement (See http://www.isb-sib-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           suppressor molecule deleted in colorectal cancer.";
J. Cell Biol. 127:2009-2020(1994).
J. Cell Biol. 127:2009-2020(1994).
TFUNCTION: MAY BE INVOLVED AS A REGULATORY PROTEIN IN THE TRANSITION OF UNDIFFERENTIATED PROLIFERATING CELLS TO THEIR DIFFERENTIATED STATE. MAY ALSO FUNCTION AS A CELL ADHESION MOLECULE IN A BROAD SPECTRUM OF EMBRYONIC AND ADULT TISSUES.
                                                                                           SMART; SM00060; FN3; 6.
SMART; SM00410; IG_like; 2.
SMART; SM00408; IGc2; 2.
                                                                                                                                                                      Pfam;
                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vielmetter J., Roman J.M., Dreyer W.J.;
"Neogenin, an avian cell surface protein expressed during
neuronal differentiation, is closely related to the human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Neogenin (Fragment)
                                                                              Transmembrane;
                                                                                                                                         PRINTS; PRODO14;
                                                                                                                                                         Pfam;
                                                                                                                                                                                   InterPro; IPR003598; Ig_c2.
InterPro; IPR003600; Ig_like
                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                    HSSP;
                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=95105243; PubMed=7806578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=White leghorn;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NEO1_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS. SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Type I membrane protein.

DEVELOPMENTAL STAGE: IN RETINA, EXPRESSED ON GANGLION CELL FIBERS AS SOON AS THEY BEGIN TO EXTEND THEIR AXONS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GDGVRCVCMVNSIPDSSLVFELPT 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGINIPGVLSSLP--SLGFSLPT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAIYEDHVTMEMRPARPEDGGTYSCVA--ENQHGASSTSFNISVEYPPLVLPASRCTAG 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INGSLWVVSGDPVSVTCRAE---
                                                                                                                                                      PF00041; fn3; 6
PF00047; ig; 4.
                                                                                                                                                                                                                                                                   P11276;
                                                                                                                                                                                                                                                                                 U07644;
                                                                                                                                                                                                                                 IPR003961; FN_III.
IPR003962; FnIII_repeat.
                                                                                                                                                                                                                    IPR003006;
 1091
1112
33
                                                                                                                                                                                                                                                                    2MFN
                                                                                                                                                                                                                                                                                 AAC59662:1; -.
                                                                            Immunoglobulin domain; Glycoprotein; Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                           FUTYPEIII.
 1090
1111
1443
102
                                                                                                                                                                        6
                                                                                                                                                                                                                   Ig_MHC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -PQSNGTLTCVATWKSLKARKSATVNLTV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Embryonic brain;
                 CYTOPLASMIC (POTENTIAL)
                                 POTENTIAL.
                                            EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1443 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --SEPAAILTVLRGGKVM
                                                                                                                                                                                                                                                                                                                                                and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --- IRCPQD
                                                                                                                                                                                                                                                                                                                                .ch/announce/
                                                                                                                                                                                                                                                                                                                                                            In
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                                                                                                                                                                                                                                                                            no
                                                                                                                                                                                                                                                                                                                                                           way
```

way

```
RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                    Neogenin precursor.
NEO1 OR NGN.
HOMO Sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            092859; 000340;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
DOMAIN
               MEDLINE-97312699; PubMed-9169140;
Vielmetter J., Chen X.-N., Miskevich F., Lane R.P., Yamakawa K.,
Korenberg J.R., Dreyer W.J.;
"Molecular characterization of human neogenin, a DCC-related pro
                                                                                                                                                                                                                                                         TISSUE=Fetal brain;
MEDLINE=97236653; PubMed=9121761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HUMAN
                                                                                                            TISSUE=Fetal
                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                   gene."
                                                                                                                                                                                                                                         Meyerhardt J.A., Look A.T., Bigner S.H.,
                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                            Oncogene
                                                                                                                                                                                                                       "Identification and characterization
                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NEO1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    372 GFYQCIA 378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21 IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRY- 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -DQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRAGGS----LLISDVTEEDVGTYTCIADNENETIEAQAELAVQVPPEFLKRPANIYAHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTLTCVA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMDIVFECEVTGKPT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VRQPSSLTKVTGQNAVFPC-VAGGFPTPYVRWTKNG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NE----PCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
49; Conser
    mapping
                                                                                                                                                                            14:1129-1136(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
    of its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                               (ISOFORMS 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5.7%;
26.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158050
  gene (NEO1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -PTVKWVKNGDVVIPSDYFKIVKEHNLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IG-LIKE C2-TYPE DOMAIN 2
IG-LIKE C2-TYPE DOMAIN 3
IG-LIKE C2-TYPE DOMAIN 4
FIBRONECTIN TYPE-III 1
FIBRONECTIN TYPE-III 2
FIBRONECTIN TYPE-III 3
FIBRONECTIN TYPE-III 5
FIBRONECTIN TYPE-III 5
FIBRONECTIN TYPE-III 6
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ψ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 558C6795579C0E26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117.5;
No. 0.1
  to chromosomal position 15q22.3-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1461
                                                                                                                                                                                                                       of
                                                                                                                                                                                                                   neogenin, a DCC-related
                                                                                                                                                                                                                                         Fearon E.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73;
                    a DCC-related protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EELITED --- SERFA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1443;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 6 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -VLGLVKSDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11;
  CARBOHYD
CARBOHYD
CARBOHYD
VARSPLIC
CONFLICT
SEQUENCE
                                                                                                                                                                        CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                     DISULFID DISULFID DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                                                                      DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genomics 41:414-421(1997).

1: FUNCTION: MAY BE INVOLVED AS A REGULATORY PROTEIN IN THE TRANSITION OF UNDLIFERRUTIATED PROLIFERATING CELLS TO THEIR DIFFERENTIATED STATE. MAY ALSO FUNCTION AS A CELL ADHES (ON MOLECULE IN A BROAD SPECTRUM OF EMBRYONIC AND ADULT TISSUES.

1: SUBCELLULAR LOCATION: Type I membrane protein.

1: ALTERNATIVE PRODUCTS: AT LEAST 2 ISOFORMS; 1 (SHOWN HERE) AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00041; fn3; 6.

Pfam; PF00047; ig; 4.

PRINTS; PR00014; FNTYPEIII.

SMART; SM00060; FN3; 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U61262; AAB17263.1;
EMBL; U72391; AAC51287.1;
HSSP; P02751; lTTF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                               CARBOHYD
                                                                                                                                                     CARBOHYD
                                                                                                                                                                                                                                                                                                                             DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transmembrane; Immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <del>-</del>
                                                                                                                                                                                                                                                                                                                                                    DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIM; 601907;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               q23.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY: CONTAINS 4 IMMUNOGLOBULIN-LIKE C2-TYPE DOMAINS SIMILARITY: CONTAINS 6 FIBRONECTIN TYPE III-LIKE DOMAINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ARE PRODUCED BY ALTERNATIVE SPLICING.
TISSUE SPECIFICITY: WIDELY EXPRESSED AND ALSO IN CANCER CELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SM00408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HGNC:7754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR003962;
IPR003006;
IPR003598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          non-profit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR003600;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR003961;
                                      909
1248
                                                                                                                                                                                                                                                                                                                         e splicing.
3
34 · 1461
34 · 1105
1106 · 1126
1127 · 1461
1127 · 1461
1128 · 128
263 · 327
355 · 417
436 · 533
536 · 629
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
630 · 729
                                                                                                                                                                                                                                                                                                                             850
951
1118
                                                                                                                                                                        210
326
ΑĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IG_like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IGc2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEO1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FN_III.
FNIII_repeat.
Ig_MHC.
Ig_c2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _Ig_like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TO THE IMMUNOGLOBULIN
                                                                                                                                                                                                                                                                                                                                           CYTOPLASMIC (POTENTIAL).
IG-LIKE C2-TYPE DOMAIN 1.
IG-LIKE C2-TYPE DOMAIN 2.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 3.
IG-LIKE C2-TYPE DOMAIN 4.
FIBRONECTIN TYPE-III 1.
FIBRONECTIN TYPE-III 3.
FIBRONECTIN TYPE-III 4.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 5.
FIBRONECTIN TYPE-III 6.
                                                        POLY-VAL.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is not removed. Usage by and for commercial agreement (See http://www.isb-sib.ch/announce/
                  N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEOGENIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain; Glycoprotein; Signal; Repeat;
  7AAE897E69635A21 CRC64;
                        (IN ISOFORM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rmatics and the
There are no re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUPERFAMILY.
                                        2°.
                                                                               (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ıs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          o
```

Дb ğ

밁 Q

Qy

밁 Qy

밁

```
Search completed: April 28, 2003, 18:09:47 Job time : 16.3692 secs
                                                               g
                                                                                                                          ₽
                                                                                                                                                        ğ
                                                                                                                                                                                         뮹
                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                             Query Match 5.5%; Score 114.5; DB 1; Length 1461; Best Local Similarity 24.4%; Pred. No. 0.3; Matches 68; Conservative 31; Mismatches 107; Indels 73; Gaps
                                                            203 SGMLVI---SNAT--EGDGGLYRCVVESGGPP---KYSDEVELKVLPDPEVISDLVFLKQ 254
                                                                                                                                                                                       311 TEDDAGTYFCIADNGNETIEAQAELTVQAQPEFLKQPTNIYAHESMDIVFECEVTGKPT- 369
                                                                                                                                                                                                                                                    16 SGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITN----- 69
                                                                                                                                                                                                              93 EPSDSGNIRCSLQNSR--LHGSAYLTVQVMGELFIPSVNLVVAENE----PCEVTCLPSH 146
                                                                                                                                                                                                                                                                                                                                                                                13;
```

•		
•		
•	·	
•		
	•	
		• • • • • • • • • • • • • • • • • • •
		•
	·	
-		

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

April 28, 2003, 18:09:54; Search time 19.0659 Seconds

(without alignments) 1946.300 Million cell updates/sec

Title: Perfect score: US-09-729-264-6 2077

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

283224

283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters:

DB seq length: 0
DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing Maximum Match Match 100% first 45 summaries

Database :

score is derived No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.

SUMMARIES

L	106	106	106	25 108.5																	8 128					3 133	2 139.5	1 151	No. Score	Result
	տ	5	5	ъ	ហ	ر ن	ហ	ហ	ហ	5	5	5	U	ъ	ப	ر ت	6	6	6	6	6.2	6	o	6	6	6		7.3	Match	* Query
1092	2491	946	802	487	391	890	1177	764	693	416	152	1443	620	338	4391	188	1070	881	871	1447	345	6642	345	164	345	1427	344	404	Length	
ب	ᆫ	٢	N	2	N	۲	Ν	N	N	 4	N	N	Ν	N	N	N	N	Ľ	Н	N	N	N	N	N	N	N	N	_	- BB	
JN0635	A28372	A47299	T13149	S65133	T09058	A53743	T16594	A49448	S49228	A42879	T18975	I50600	JH0593	JC1238	A38096	T15651	JC4593	I48697	I48696	A54100	JC1239	T29757	S03199	T24272	JC4025	I51669	I56551	161596	ID	
															,														1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
neural cell adhesi		recep	mitogen-and stress		butyrophilin homol	ine	hypothetical prote	irregular chiasm C	sodium-dependent p	advanced glycosyla	ica	_	Schwann cell myeli	opioid-binding pro	perlecan precursor	hypothetical prote	protein-tyrosine k		protein-tyrosine k	g.	opioid-binding pro		opioid-binding pro		opioid-binding cel	essor	min - ra	advanced glycosyla	Description	

45	43	42	41	40	39	38	37	36	35	34	33	32	31	30	
101.5 101	101.5	101.5	102	102	103	103	103.5	103.5	104	105	105	105.5	105.5	105.5	
4.9	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	
841 338	421	344	868	721	1273	365	1323	423	2222	5825	662	3707	882	862	
22	N	۲	Ν	N	N	N	N	N	N	N	N	N	Ν	2	
JC5894 JC5519	T46266	RWRTC2	A46512	T41530	T42405	JC7780	PN0568	T29549	T13924	T12117	T16525	S18252	I38912	I49583	
killer cell inhibi , 50K glycoprotein p		T-cell surface gly '	CD22 homolog/B lym '	hypothetical prote	sax-3 protein'- Ca	coxsackie- and ade	connectin 3B - chi	hypothetical prote	sdk protein - frui,	polyprotein - fava i	hypothetical prote	heparan sulfate pr	receptor tyrosine	differentiation an	

ALIGNMENTS

advanced glycosylation end-products receptor precursor - human N;Alternate names: advanced glycosylation end product-binding protein, 35K; glycoprot C;Species: Homo sapiens (man) C;Date: 24-May-1996 #Sequence_revision 07-Feb-1997 #text_change 16-Jul-1999 C;Date: 24-May-1996 #Sequence_revision 07-Feb-1997 #text_change 16-Jul-1999 C;Accession: I61596; B42879; S27968 R;Sugaya, K.; Fukagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko, R;Sugaya, K.; Fukagawa, T; Matsumoto, K.; Mita, K.; Takahashi, E.; Ando, A.; Inoko,

A;Title: Three genes in the human MHC class III region near the junction with the clanterpart of mouse mammary tumor gene int-3.

A;Reference number: A55562; MUID:95137587; PMID:7835890

A;Accession: I61596 Genomics 23, 408-419, 1994

A; Molecule A; Status: nucleic acid sequence not shown; translation not shown; translated type: DNA

A; Residues: 1-404 <RES>

A;Cross-references: GB:D28769; NID:g561657; PIDN:BAA05958.1; PID:g561659 R;Neeper, M.; Schmidt, A.M.; Brett, J.; Yan, S.D.; Wang, F.; Pan. Y.C.; Elliston, K.; J. Biol. Chem. 267, 14998-15004, 192 A;Title: Cloning and expression of a cell surface receptor for advanced glycosylation A;Reference number: A42879; MUID:92340547; PMID:1378843 A;Accession: B42879

A;Molecule type: mRNA
A;Residues: 'G',2-99,'R',101-404 <NEE>
A;Cross-references: EMBL:M91211; NID:g190845; PIDN:AAA03574.1; PID:g190846

A; Experimental source: lung

A; Note: sequence extracted from NCBI backbone (NCBIP:109438)

C:Comment: Advanced glycosylation end products are heterogeneous nonenzymatically gly cellular function, thus contributing to tissue lesions in diabetes.

C:Comment: This receptor appears also to mediate the effects of amyloid beta peptide ates in the neurotoxic pathway that produces dementia in Alzheimer's disease.

A;Gene: GDB:AGER A;Cross-references: GDB:306354; OMIM:600214 A;Map position: 6p21.3-6p21.3 A;Introns: 18/1; 53/3; 119/1; 140/3; 170/1; 231/1; 274/3; 322/1; 331/1; 373/2

C; Function:

A;Description: neuronal receptor for amphoterin, a DNA-binding protein involved in ne C;Superfamily: advanced glycosylation end products receptor; imm:noglobulin homology C;Keywords: Alzheiner's disease; glycoprotein; receptor; transmembrane protein | E;1-22/Domain: signal sequence #status predicted <SIG> E;23-404/Product: advanced glycosylation end products receptor #status predicted <MAT E;23-344/Domain: extracellular #status predicted <EXT> E;31-101/Domain: immunoglobulin homology <IM1>

F;137-210/Domain: immunoglobulin homology <IM2> F;252-303/Domain: immunoglobulin homology <IM3>

F;345-362/Domain: transmembrane #status predicted <TMM>F;363-404/Domain: intracellular #status predicted <INT>F;25.81/Binding site: carbohydrate (Asn) (covalent) #status F;38-99,144-208,259-301/Disulfide bonds: #status predicted (covalent) #status predicted

Query Match

Score 151; DB 1;

```
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-344 < CRES>
A;Cross-references: EMBL:U16845; NID:g755184; PIDN:AAA67445.1; PID:g755185
C;Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precurso
                                                                            д
                                                                                                                     Ş
                                                                                                                                                                 В
                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 2
156551
                                  Q
                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 19-May-2000
C;Accession: I56551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
밁
                                                                                                                                                                                                                                                                                                                                    Вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Struyk, A.F.; Canoll, P.D.; Wolfgang, M.J.; Rosen, C.L.; D'Eustachio, P.; Salzer, J. Neurosci. 15, 2141-2156, 1995
A;Title: Cloning of neurotrimin defines a new subfamily of differentially expressed A;Reference number: I56551; MUID:95198094; PMID:7891157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Reference number: I56551; MUID:95198094; A;Accession: I56551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    neurotrimin - rat
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                181
                                                                                                                                                                   129
                                                                                                                                                                                                               110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115 LTVQVMGELFIP----SVNLVVAENEP------
                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT
GQKGTLQCEASAVPSAEFQ---WFK
                                     NIPGVL----SSLPSLGFSLPTWGK 245
                                                                                                                                                                                                          HGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFV 169
                                                                                                                                                                                                                                                    DKWCLDPRVVLLSN---TQTQY--
                                                                                                                                                                                                                                                                                             ----VRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSRL 109
                                                                                                                                                                                                                                                                                                                                                                              RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLS-- 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TETASLPPKSCESSDPEQRNSSCGPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LVPNEKGVSVKEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG-------KP 163
                                                                                SEDEYLE----IQGITREQSGEYECSAS-NDVAAPVVRRVNVTVNYPPYISEAKGTGVPV 235
                                                                                                                       PEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP-----QDTGGGI 224
                                                                                                                                                                 H----LIVQVSPKIVEISSDISINEGNNISLTCIATGRPE-PTVTWR---HISPKAVGFV 180
                                                                                                                                                                                                                                                                                                                                       RLLFLYPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDNRVTRVAWLNRSTILYAGN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG----WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE- 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -QSEEPEAGESSTGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                             24.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23.38;
                                                                                                                                                                                                                                                                                                                                                                                                                                         6.7%; Score 139.5;
24.9%; Pred. No. 0.(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 0.001;
8; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILW
                                                                                                                                                                                                                                                    ----SIEIQNVDVYDEGPYTCSVQTDNHPKTSRV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  353
                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QRRGEERKAPENQEEEEERAELN
                                                                                                                                                                                                                                                                                                                                                                                                                                             0.0062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                112;
                                                                                                                                                                                                                                                                                                                                                                                                                          110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 344;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                146.;
                                                                                                                                                                                                                                                                                                                                                                                                                          49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         389
                                                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19;
```

```
J.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neu
                                                                                                                                                                                                                           A;Gene: GDB:OPCML; OBCAM; OPCM
A;Cross-references: GDB:251677; OMIM:600632
A;Map position: 11pter-11qter
C;Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-ter
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene 155, 213-317, 1995
A;Title: Cloning, sequencing
A;Reference number: JC4025; N
                                QΥ
                                                                          В
                                                                                                            QY
                                                                                                                                                                                                                                                                                                                          A; Experimental source: brain C; Comment: This protein binds opioid alkaloids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Expression of a homologue of the deleted in colorectal A;Reference number: I51668; MUID:95113183; PMID:7813784 A;Accession: I51669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Xenopus laevis (African clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
C;Accession: I51669
밁
                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-345 <SHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Accession: JC4025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: Homo sapiens (man)
C;Date: 13-Jun-1995 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   opioid-binding cell adhesion protein - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                               C; Genetics
                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:L34774; NID:g514373; PIDN:AAA36387.1; PID:g514374
                                                                                                                                                                                                                                                                                                                                                                                                                        A; Accession: JC4025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Shark, K.B.; Lee, N.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JC4025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:U10986; NID:g606873; PIDN:AAA70168.1; PID:g606874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-1427 <PIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Status: preliminary; translated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dev. Biol. 166, 654-665,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; Pierceall,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor suppressor - African clawed frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      151669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243 LQRPSNVVAIEGQDAVLECAVS-GYPTPTIVWMQGD------
                                      59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79
79
                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 78
                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XDCCa
                                                                        RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW·LNRSTILYAG
                                                                                                              RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YQCIAENEAGNIQTYAQLIIPDPAVPSSSILPSAPRDV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTCVA-----TWKSLKARKSATVNLTVI-RCPQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCEVTCL----PSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGT 191
NDKWSIDPRVIILVN---TPTQY----
                                    ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DIEFECAVSGKPS----PTVKWTKNGEVVIPSDYFQIVDGSNLR----ILGLVKSDEGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VLGG--SNLLISNVTDDDAGAYTCVATYKNENTSFSADLTVMVPPQFLNHPANLYAYESM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSAYLTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                      Similarity 73; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W.E.; Reale, M.A.; Candla, A.F.; Wright, C.V.; Cho,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1994
                                                                                                                                                                     6.3%;
25.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  g and localization to chromosome MUID:95237612; PMID:7721093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33;
                                                                                                                                                        34;
                                                                                                                                                                     Score 130; DB 2
Pred. No. 0.031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 133;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from GB/EMBL/DDBJ
                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
---SIMIQNVDVYDEGPYTCSVQTDNHPKTSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-Jul-1995 #text_change
                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                        108;
                                                                                                                                                                                                                                                                                                                                the presence of acidic lipids,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -VPVLVSS 442
                                                                                                                                                                                         Length 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1427;
                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -EPVPIRTR----KYS 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48;
                                                                                                                                                        70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-Mar-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer (DCC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     K.R.; Fearon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                            78
                                                                                                                  58
127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding
                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     변. R
                                                                                                                                                                                                                                                                                                                                exhi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
```

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T24272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: CESP:T01B7.8
A;Map position: 2
A;Introns: 20/3; 90/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: Z19867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        submitted to the EMBL Data Library, October 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein T01B7.8 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source: clone T01B7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL: Z66499; PIDN: CAA91301.1; GSPDB: GN00020; CESP: T0187.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-164 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: T24272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     opioid-binding protein OPCAM precursor - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 17-Mar-2000
                                                                                                            C;Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termin
C;Keywords: transmembrane protein
F;1-27/Domain: signal sequence #status predicted <SIG>
F;28-345/product: opioid-binding protein OPCAM #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                           C;Accession: S03199
R;Schofield, P.R.; McFarland, K.C.; Hayflick, J.S.; Wilcox, J.N.; Cho, T.M.; Roy, S.; Le EMBO J. 8, 489-495, 1989
EMBO J. 8, 489-495, 1989
A;Title: Molecular characterization of a new immunoglobulin superfamily protein with pot A;Title: Molecular characterization of a new immunoglobulin superfamily protein with pot A;Reference number: S03199; MUID:89251576; PMID:2721489
                                                                                                                                                                                                                  A;Cross-references: EMBL:X12672; NID:9585; PIDN:CAA31192.1; PID:9586
                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1-345 <SCH>
                                                                                                                                                                                                                                                                                                     A; Accession: S03199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarian -- Matches 72; Conservative
                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 VH----LIVQVPPQIMNISSDITVNEGSSVTLLCLAIGRPE-----PTVTWR------HL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165 SYY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV----IR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 KAKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEETRLATGLDG 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            216 CPQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                173 SYKEGQGFYSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYIS 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157 LGLLVSHSSYYFVPEPSDLQSAVSILALIPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCCRRRCCGC 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102 CRICCCTRCCTCCR 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 277 -- NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 KRQGGCGCCGCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 LAILLAIGTEIAV----SQVQSAV-----LPVSSTELATVGTDVSTASTAIDTLGNSSSRV 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.2%; Score 129.5; DB 32.1%; Pred. No. 0.015;
                        6.2%; Score 129; DB 2; Length 345
25.7%; Pred. No. 0.037;
ative 33; Mismatches 109; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -GCCGCGGGGGG--CGCCCCRPRCCCCCRRCCTC 101
                                                                                DB 2; Length 345;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27; Gaps
                                      66;
                                      Gaps
                                            16;
```

```
QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein UNC-89 - Caenorhabditis elegans
C; Species: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Du, Z.; Le, T.T.; Wilson, R. submitted to the EMBL Data Library, May 1997 A;Description: The sequence of C. elegans cosmid C09D1. A;Reference number: Z20679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 03-Dec-1999 C;Accession: T29757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-642 <DUZ>
A;Cross-references: EMBL:AF003131; PIDN:AAB54132.1; GSPDB:GN00019; CESP:unc-89
A;Experimental source: strain Bristol N2; clone C09Dl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Map position: 1
A;Introns: 17/2; 108/3; 154/2; 211/2; 265/3; 326/2; 352/3; 426/2: 454/1; 500/1; 537/1
/3; 5917/1; 6027/1; 6061/3; 6153/2; 6515/1; 6552/3; 6609/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene: CESP:unc-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Genetics
                                                                                                                                                                                                                                QУ
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                       γ
                                                                                                                                                                                        Вþ
                                                                                         Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173 SVKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYIS 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165 SYY----FVPEPSDLOSAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTV-----IR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      128 VH----LIVQVPPQIMNISSDVTVNEGSSVTLLCLAIGRPE-----PTVTWR------HL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228 KAKNTGVSVGOKGILSCEASAVPMAEFQ---WFKEDTRLA 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          216 CPQDTGGGINIPGVL----SSLPSLGFSLPTWGKVGLGLA 251
                                                                                                                                                                                                                                                                                                                                                                                2038 LIIPNAQDSGKITVEASNEVGSSESSAQLTVNPPSTTPIVVDGPKSVTIKETETAEFKAT 2097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 RLLFLVPTGVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAG 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79 NDKWSIDPRVIILVN---TPTQY------SIMIQNVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                                                                                                                        2144 TVKVTAQNSAGQDSKQADLKVEPNVKAPKFKSQLTDKVADEGEPLRWNLELDGPSPGT-- 2201
                                                                                                                                                                                                                                                                                    2098 IS-GFPAPTVKWTINEKIVEESRTITTIKTEDVYT-----LKISNAK1EQTG 2143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59 ----SVRPMEDIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 RHLLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDNVVL---
                                                                                         2202 -EVSWILNGQPLTKSDTVQVVDHGDGTYHVTIAEAKPENSGTLTAKAKNAAGECETSAKV 2260
2261 TVNGGNKKPEFVQAPQN 2277
                                                                                                                                                                                                                                                                                                                                                                                                                              6 LTVPEAVGSG-----SGNE------41EGPQNATVLKGSQARFNCT 40
                                                                                                                                       151 PDISWEL-GLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATV 209
                                                210 NLT-----VIRCPQD 219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match 6.2%; Score 129; DB Local Similarity 23.0%; Pred. No. 0.89;
                                                                                                                                                                                                                                                                                                                                  41 VSQGW--KLIMWALSDMVVLSVRPMEPIITNDRETSQRYDQGGNETSEMIIHNVEPSDSG 98
                                                                                                                                                                                                                                   99 NIRCSLONSRLHGSAYLTVQVMGELFIPS----VNLVVAENEPCEVTCL---PSHWTRL 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 6642:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97; Indels 60; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
```

opioid-binding protein (clones SG8 and SG13) - rat C;Species: Rattus norvegicus (Norway rat)

```
C;Keywords: transmembrane protein; tumor suppressor
F;1-25/Domain: signal sequence #status predicted <SIG>
F;26-1447/Product: tumor suppressor protein DCC #status predicted <MAT>
                                                                                                                                                               A;Cross-references: GDB:119838; OMIM:120470
A;Map position: 18q21.1-18q21.1
                                                                                                                                                                                                                                     A;Cross-references: GB:M32292; NID:g181492; PIDN:AAA35751.1; PID:g181493
                                                                                                                                                                                                                 A; Gene: GDB: DCC
                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-750 <FEA>
                                                                                                                                                                                                                                                                                                                                                                A;Residues: Î-1447 <HED>
A;Cross-references: EMBL:X76132; NID:g453209; PIDN:CAA53735.1; PID:g453210
R;Fearon, E.R.; Cho, K.R.; Nigro, J.M.; Kern, S.E.; Simons, J.W.; Ruppert, J.M.; Hamilto
Science 247, 49-56, 1990
                                                                                                                                                                                                                                                                                                                                A; Reference number: A40098; MUID: 90100559; PMID: 2294591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Title: The DCC gene product in cellular differentiation and colorectal tumorigenesis. A;Reference number: A54100; MUID:95011532; PMID:7926722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C:Species: Homo sapiens (man)
C:Date: 02-Aug-1994 #sequence_revision 02-Aug-1994 #text_change 05-Nov-1999
C:Accession: A54100; A40098
R:Hedrick, L:; Cho, K.R.; Fearon, E.R.; Wu, T.C.; Kinzler, K.W.; Vogelstein, B. Genes Dev. 8, 1174-1183, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N; Alternate names: colorectal cancer suppressor DCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tumor suppressor protein DCC precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A54100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                         Matches
                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:M88710; NID:g203247; PIDN:AAA40859.1; PID:g203248; GB:M88711; NIIC;Superfamily: carcinoembryonic antigen; carcinoembryonic antigen precursor amino-termin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Lippman, D.A.; Lee, N.M.; Loh, H.H.

Gene 117, 249-254, 1992

A;Title: Opicid-binding cell adhesion molecule (OBCAM)-related clones from a rat brain
A;Reference number: JC1238; MUID:92347701; PMID:1339369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 19-May-2000
C;Accession: JC1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228 KAKNTGVSVGQKGILSCEASAVPMAEFQ---WFKEDTRLATGLDGVRI 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     216 CPQDTGGGINIPGVL----SSLPSLGFSLPTWGK----VGLGLAGTML 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             173 SVKEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYIS 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    165 SYY----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IR 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 VH----LIVQVPPQIMNISSDITVNEISSVTLLCLAIGRPE-----PTVTWR------HL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHS 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 79 NDKWSIDPRVIILVN---TPTQY-----SIMIQNVDVYDEGPYTCSVQTDNHPKTSR 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59 ----SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ-----NSR 108
                                                                                                                                                                                                                                                                                                                                     Identification of a chromosome 18q gene that is altered in colorectal cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20 RLLELVPTGVPVRSGDATFFKAMDNVTVRQGESATLRCTIDDRVTRVAW-LNRSTILYAG 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 RHLLIVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL--- 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1-345 <LIP>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                    24.8%;
                             6.2%; Score 128; DB; 24.8%; Pred. No. 0.21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.2%;
         33; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 128; DB 2; Length 345; Pred. No. 0.044;
                                               DB 2; Length 1447;
      99; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110; Indels
      50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            70;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
  10;
                                    Ş
                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-871 <GAN1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: I48696
                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ㅁ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 431 AP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          233 LP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DSXZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UNA
```

```
C;Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase ho C;Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; t F;22-81/Domain: signal sequence #status predicted <SIG> F;22-871/Product: protein-tyrosine kinase nsk2, splice form 2 #status predicted <MATZ F;22-456, 'A', 466-871/Product: protein-tyrosine kinase nsk2, splice form 4 #status pre F;22-456, 'A', immunoglobulin homology <IMM1> F;135-192/Domain: immunoglobulin homology <IMM2> F;135-192/Domain: immunoglobulin homology <IMM3> F;226-284/Domain: immunoglobul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;222,462/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;575-865/Domain: protein kinase homology <KIND
F;583-591/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;498-518/Domain: transmembrane #status predicted <TRM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Cross_references: MGI:103308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Cross-references: EMBL: x86444; NID: g929723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:X86444; NID:g929723; PIDN:CAA60165.1; PID:g929724
A;Experimental source: splice form 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Ganju, P.; Walls, E.; Brennan, J.; Reith, A.D.
Oncogene 11, 281-290, 1995
A;Title: Cloning and developmental expression of Nsk2, a novel receptor tyrosine kina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: nucleic acid sequence not shown; translated from GB/ENBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein-tyrosine kinase (EC 2.7.1.112) nsk2 precursor, splice form 2 - mouse N;Alternate names: receptor-type tyrosine kinase N;Contains: protein-tyrosine kinase nsk2 precursor, splice form 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 19-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Species: Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Comment: For alternate splice forms see PIR:I48697
172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
                                                                                                                                                                                                  122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
                                                                                                 78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                         19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----VLPS 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        324 ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279 VI------QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56 VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SGSGNEV-----IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1-456, 'A', 466-871 <GAN2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148696; S60738
Walls, E.; Bre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source: splice form 4
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.1%; Score 127.5; D
21.7%; Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                    41;
                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                               125; Indels 87; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 871;
                                                                                                                                                                                                                                                                                                                                                                                          16;
```

```
밁
                                                          δÃ
                                                                                                                          В
                                                                                                                                                                            õ
                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                   ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Superfamily: mouse ror-related receptor; immunoglobulin homology; protein kinase homo. C;Keywords: ATP; glycoprotein; phosphotransferase; receptor; transmembrane protein; tyro F;1-21/Domain: signal sequence #status predicted sigs F;22-881/Product: protein-tyrosine kinase nsk2, splice form 1 #status predicted <MAT1> F;22-456,'A',466-881/Product: protein-tyrosine kinase nsk2, splice form 3 #status predicted: F;42-101/Domain: immunoglobulin homology <IMM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein-tyrosine kinase (EC 2.7.1.112) nsk2 precursor, splice form 1 - mous NALIternate names: receptor-type tyrosine kinase N:Contains: protein-tyrosine kinase nsk2 precursor, splice form 3 C:Species: Mus musculus (house mouse) C:Species: Mus musculus (house mouse) C:Date: 19-May-2000 #sequence_revision 19-May-2000 #text_change 19-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;583-591/Region:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Experimental source: splice form 3 C; Comment: For alternate splice forms see PIR:148696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-456, 'A', 466-881 <GAN2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oncogene 11, 281-290, 1995
A;Title: Cloning and developmental expression of Nsk2, a novel receptor tyrosine kinase A;Reference number: 148696; MUID:95349951; PMID:7624144
A;Accession: 148697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;575-865/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;498-518/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;135-192/Domain: immunoglobulin homology <IMM2>F;226-284/Domain: immunoglobulin homology <IMM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: nsk2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: MGI:103308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: S60740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X86445; NID:g929725; PIDN:CAA60166.1; PID:g929726
A;Experimental source: splice form 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Residues: 1-881 <GAN1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: nucleic acid sequence not shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Ganju, P.; Walls, E.; Brennan, J.; Reith, A.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; 222, 462/Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cross-references: EMBL: X86445; NID: g929725
                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                          133 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                         122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----NALRENSRIAALE- 171
224 TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         278 ------CCCRCC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                336 LVFLPTTSHRDPEDAQELLIHTAWNEL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133 AENEPCEVTC----LPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               389 VVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                224 TFGSFVTLRCTEIGIP-----VPTISWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP-
                                                                                                                                                                            78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-----LTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SNGTLTCVAT - - - - WKSLKARKSATVNLTVIR - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LSSLPSLGFSLP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQYRGEGVLMQGPGEKML 335
                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 148697; S60740
                                                                                                                       -SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVLGRILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein kinase homology <KIN>
protein kinase ATP-binding motif
site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transmembrane #status predicted <TRM>
                                                                                                                                                                                                                                                                                                                                                                                      6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -FCCR 287
                                                                                                                                                                                                                                                                                                                                                                 41;
                                                                                                                                                                                                                                                                                                                                                                                      Score 127.5; DB 1; Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---KAVSPLCRPAAEALLCYHLFLECSPG 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                              125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -CPQDTGGGINIPG----V 229
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 881;
                                                                                                                                                                                                                                                                                                                                                              87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        277
                                                                                                                                                                                                                                                                                                                                                           16;
```

```
γ
                                                                                                               Вb
                                                                                                                                                             δÃ
                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Residues: 1-1070 <PAR>
A;Cross-references: GB:U40271; NID:g1322231; PIDN:AAC50484.1; PID:g1322232
C;Comment: This protein is a member of receptor protein tyrosine kinase fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
     B
                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;726-1070/Domain: intracellular #status predicted <INC>
F;794-1065/Domain: protein kinase homology <KIN>
F;116,175,184,214,268,283,405,463,567,646/Binding site: carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase hom C;Keywords; cell adhesion, extracellular protein; glycoprotein; phosphotransferase; t F;1-30/Domain: signal sequence #status predicted <SIG> F;31-1070/Product; protein-tyrosine kinase 7 #status predicted <IAT> F;31-703/Domain: extracellular #status predicted <EXC> F;704-725/Domain: transmembrane #status predicted <TMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Homo sapiens (man)
C;Date: 16-Apr-1996 #sequence_revision 24-May-1996 #text_change 24-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GDB:134760; OMIM:601890
A;Map position: 6p21.1-6p12.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: JC4593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein-tyrosine kinase-related receptor PTK7 precursor - human
N;Alternate names: receptor protein tyrosine kinase-like protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JC4593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Characterization of the human full-length PTK7 A;Reference number: JC4593; MUID:97037064; PMID:8882711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Park,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: GDB:PTK7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochem. 119, 235-239,
379 ANIAESDAGVYTCHAA--NLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCL 434
                                                      183 ALTPQSN-GTLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL
                                                                                                             329 EPRVFTAGSEE---RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY-----QKGHELVL 378
                                                                                                                                                                125 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSIL 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389 VVPTPMPICREYCLAVKELFCAK 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           336 LVFLPTTSHRDPEDAQELLIHTAWNEL-
                                                                                                                                                                                                                          278 ATVFA-
                                                                                                                                                                                                                                                                                                                                 218 SIADESFARVVLAPQDVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRR 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               230 LSSLPSLGFSLP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188 SNGTLTCVAT----WKSLKARKSATVNLTVIR-------CPQDTGGGINIPG-----V
                                                                                                                                                                                                                                                                                                                                                                                     11 AVGSGSGNEVIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITN 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S.K.;
                                                                                                                                                                                                                                                                           DRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELF 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKDSQGYCAQYRGEGVLMQGPGEKML 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------CCCRCC-----FCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JC4593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee, H.S.; Lee, S.T. 19, 235-239, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                       -NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLF 328
                                                                                                                                                                                                                                                                                                                                                                                                                                         6.0%; Scc
24.8%; Pro
vative 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ---TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 125; DB Pred. No. 0.25;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -KAVSPLCRPAAEALLCYHLFLECSPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                              109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1070
                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cDNA encoding a receptor prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein (RPTK)
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family,
                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           d ing
```

submitted to the EMBL Data Library, May 1996 A; Description: The sequence of C. elegans cosmid C27A2

R; Nhan,

C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999 C;Accession: T15651

C; Species: Caenorhabditis elegans

hypothetical protein C27A2.5 - Caenorhabditis elegans

```
C;Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 05-Nov-1999
C;Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 05-Nov-1999
C;Accession: A38096; S19256; S77946; A41036; B33625; A33625; A41736
R;Murdoch, A.D.; Dodge, G.R.; Cohen, I.; Tuan, R.S.; Iozzo, R.V.
J. Biol. Chem. 267, 8544-8557, 1992
A;Title: Primary structure of the human heparan sulfate proteoglycan from basement membrator, laminin, neural cell adhesion molecules, and epidermal growth factor.
A;Reference number: A38096; MUID:92235084; PMID:1569102
A;Accession: A38096
A;Molecule type: mRNA
A;Residues: 1-4391 <AUNP-A;Cross-references: GB:M85289; NID:9184426; PIDN:AAA52700.1; PID:9184427
R;Kallunki, P.; Trygyvason, K.
J. Cell Biol. 116, 559-571, 1992
A;Title: Human basement membrane heparan sulfate proteoglycan core protein: a 467-kD proteil adhesion molecules, and epidermal growth factor.
A;Reference number: A41736; MUID:92112994; PMID:1730768
A;Molecule type: mRNA
A;Residues: 1-57, D', 59-434, 'A', 436, 'FL', 438-449, 'Q', 451-502, 'A', 503-792, 'K', 794-908, 'R', 71-2979, 'H', 2981-2994, 'G', 2996-3167, 'T', 3169-3240, 'R', 3242-3426, 'R', 3428-3631, 'Q', 3633-3
                                                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data Library, October 1991

A;Reference number: $77946

A;Accession: $77946

A;Accession: $77946

A;Accession: $77946

A;Accession: $77946

A;Accession: $7946

A;Molecule type: mRNA

A;Residues: 1-57, 'D', 59-434, 'A', 436, 'EL', 438-449, 'Q', 451-502, 'A', 503-792, 'K', 794-908, 'R'
71-2979, 'H', 2981-2994, 'G', 2996-3167, 'T', 3169-3240, 'R', 3242-3426, 'R', 3428-3631, 'Q', 3633-4

A;Cross-references: EMBL:X62515; NID:g29469; PIDN:CAA44373.1; PID:g29470

A;Cross-references: EMBL:X62515; NID:g29469; PIDN:CAA44373.1; PID:g29470

A;Cross-references: MBL:X62515; NID:g29469; PIDN:CAA44373.1; PID:g29470

A;Accession: A9-396, 1991

A;Accession: A41059

A;A
A;Title: Heparan sulfate proteoglycan of human colon: partial molecular of R;Reference number: A40306; MUID:91365376; PMID:1679749
A;Accession: A40306
A;Molecule type: mRNA
A;Residues: 1018-1405, 'G',1407-1409, 'G',1411-1465 <DOD>
A;Crossreferences: GB:M64283; NID:9184424; PIDN:AAA52699.1; PID:9184425
A;Crossreferences: GB:M64283; NID:9184424; PIDN:AAA52699.1; PID:9184425
A;Crossreferences: GB:M64283; NID:9184424; PIDN:AAA52699.1; Cassiman J. Cell Biol. 109, 3199-3211, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N;Alternate names: basement membrane heparan sulfate C;Species: Homo sapiens (man) C;Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #t C;Accession: A38096; S19256; S77946; A41059; A40306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:U58760; NID:q1330384; PID:q1330389; PIDN:AAB00710.1; GSPDB:GN00A;Experimental source: strain Bristol N2; clone C27A2 C;Genetics:
A;Genetics:
A;Gene: CESP:C27A2.5
A;Map position: 2
A;Introns: 19/3; 91/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Reference number: Z18382
A;Accession: T1551
A;Status: preliminary; translated
A;Molecule type: DNA
A;Residues: 1-188 <NHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:X62515 R;Tryggvason, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         perlecan precursor - human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTLTIRCCCCRRRCCGC--NCCC-RCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCRPKCCCCCRRCCTCCRTCCCTRCCTCCR 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 122.5; DB Pred. No. 0.058;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proteoglycan; heparan sulfate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                          Cassiman,
                                                                                                                                                                                                                                                                                                                                          cloning,
                                                          J.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
                                                          van
                                                                                                                                                                                                                                                                                                                                          cellul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prote
                                                          der
opioid-binding protein (clone DUZ1) - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 03-May-1994 #sequence_revision 03
C;Accession: JC1238
R;Lippman, D.A.; Lee, N.M.; Loh, H.H.
```

```
C;Superfamily: LDL receptor ligand-binding repeat homology; C;Keywords: chondroltin sulfate proteoglycan; glycoprotein; F;1-21/Domain: signal sequence #status predicted <SIG>F;22-4391/Product: perlecan #status predicted <MAT>F;22-193/Domain: I <DOM1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;4149-4151/Region: motor neuron attachment (L-R-E) motif F;4299-4301/Region: motor neuron attachment (L-R-E) motif F;4299-4301/Region: motor neuron attachment (L-R-E) motif E;65,71,76/Binding site: heparan sulfate (Ser) (covalent) #status predicted F;89,554,1755,2121,3072,3105,3279,3780,3836,4068/Binding site: carbohydrate F;2995,3933,4179/Binding site: chondroitin sulfate (Ser) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F; 2007-2034/Domain:
                                                                                                                                                                             Дb
                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                   Ър
                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                F;3845-3880/Domain:
F;3888-3921/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;368-403/Domain: I
F;531-1676/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F;199-234/Domain: LDL receptor ligand-binding repeat homology F;288-319/Domain: LDL receptor ligand-binding repeat homology F;383-359/Domain: LDL receptor ligand-binding repeat homology F;358-403/Domain: LDL receptor ligand-binding repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Reference number: A; Accession: .B33625
JC1238
                                                                                       B
                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F; 3953-4106/Domain: F; 4147-4175/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F;3687-4391/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      F;1677-3686/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;1613-1668/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;1563-1610/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;1159-1206/Domain:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein A; Residues: 2166-2171, 'X',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein
A; Residues: 1379-1384, 'X', 1386-1388, 'X', 1390-1398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Matrix-associated heparan sulfate proteoglycan:
                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;194-530/Domain: II <DOM2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GDB:126372; OMIM:14246:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: GDB:HSPG2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: A33625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                               3161
                                                                                                                                                                                                                                                                                                                                                           3067 VHIS--PNGSIIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 3007 VTVPPSEGSSYRLRSPVISIDPPSSTVQQGQDASFKCLIHDGAAPISLEWKTRNQELEDN 306
                                                                                                                                   217
                                                                                                                                                                                                                                                                                                               106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide potentially
                                                                                                                                   PQDTG 221
                                                                                                                                                                               YGLMDSH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LTVPEAVGSG--SGNEVIE-GPQNATVLKGSQARENCTVSQG------WKLIMWALSDM
                                                                                                                                                                                                                                                                     NLSVHGPPTVSVLPEGPVWVKVGKAVTLECVSAGEPRS----SARWTRISSTPAKLEQRT
                                                                                                                                                                                                                                                                                                             NSRLHGSAYLTVQVMGELFI---PSVNL-VVAENEPCEVTCLPSHWTRLPDISWEL----
                                                                                                                                                                                                                                                                                                                                                                                                     VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC------
                                                                                                                                                                                                                       -GLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                          -DIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1p36.1-1p36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                III <DOM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EGF homology <EGF1>
EGF homology <EGF>
laminin G repeat homology
EGF homology <EGF2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        laminin-type EGF-like
laminin-type EGF-like
laminin-type EGF-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            transmembrane #status
V <DOM5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IV <DOM4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ,2173-2175,'X',2177-2185 <HE3>
ly matches four different regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MUID:90078352; PMID:2687294
                                                                                                                                                                               -AVLQISSAKPSDAGTYVCLAQNALGTAQKQVEVIV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 122.5; D
Pred. No. 1.7;
28; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homology <LEG>
homology <EG7>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homology
                                                                                                                                                                                                                                                                                                                                                             ·IVGTRPSNHGTYRCVASNAYGYAQSVV 3104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <LG2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <LEG8>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <TRM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EGF homology; laminin G r
heparan sulfate; transmem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <LDL2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein-specific monocl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <LDL4>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <11011>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         75;
                                                                                                                                                                                                                                                                                                                                                                                                     OTS
                                                                                                                                                                                                                                                                     3160
                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                                                                                                                                                                                                                                                                 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
```

03-May-1994 #text_change 19-May-2000

```
Gene 117, 249-254, 1992
A;Title: Opioid-binding cell adhesion molecule (OBCAM)-related clones from a rat brain c A;Reference number: JC1238; MUID:92347701; PMID:1339369
A;Accession: JC1238
A;Molecule type: mRNA
A;Residues: 1-338 <LIP>
A;Cross-references: GB:M88709; NID:g203245; PIDN:AAA40858.1; PID:g203246
A;Experimental source: brain C;Genetics:
A;Gene: OBCAM
C;Genetics: GB:M88709 (antigen; carcinoembryonic antigen precursor amino-termin C;Superfamily: carcinoembryonic antigen precursor amino-termin C;Superfamily: carcinoembryonic antigen
Search completed: April 28, 2003, 21:09:17 Job time: 27.0659 secs
                                                                                                                   밁
                                                                                                                                                                     Ş
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΩY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 5.7%; Score 118.5; DB 2; Length 338; Best Local Similarity 25.2%; Pred. No. 0.22; Matches 72; Conservative 36; Mismatches 107; Indels 71
                                                                                                           223 KNTGVSVGQKGILSCEASAVPMAEFQ --- WFKEDTRLATGLDGVRI 265
                                                                                                                                           168 KEGQGFVSEDEYLE----ISDIKRDQSGEYECSAL-NDVAAPDVRKVKITVNYPPYISKA 222
                                                                                                                                                                                                                                                                    167 Y----FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTV-----IRCP 217
                                                                                                                                                                                                                                                                                                                            123 ----LIVQVPPQIMNISSDITVNEISSVTLLCLAIGRPE-----PTVTWR------HLSV 167
                                                                                                                                                                                                                                                                                                                                                              111 GSAYLTVQVMGELFIPSVNLVVAENEPCEVTCL----PSHWTRLPDISWELGLLVSHSSY 166
                                                                                                                                                                                                                                                                                                                                                                                                                                       74 KWSIDPRVIILVN---TPTQY------SIMIQNVDVYDEGPYTCSVQTDNHPKTSRVH 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59 --SVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQ------NSRLH 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16 LLFIP-GVPVRSGDATFPKAMDNVTVRQGESATLRCTIDDRVTRVAM-LNRSTILYAGND 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 LLTVPEAVGSGSGNEVI-EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVL----- 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107; Indels 71;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
```

•	
·	
	÷

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301932 seqs, 80129803 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-729-264-6
2077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           April 29, 2003, 11:05:56; Search time 19.0659 Seconds (without alignments) 1622.277 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MERHLLTVPEAVGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                       Published_Applications_AA: *
/cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301932
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	BB	ID	Description
_	145.5	7.0	405	ᆸ	US-08-755-235-4	Sequence 4, Appli
N	138.5	6.7	2473	9	US-10-184-644-559	Sequence 559, App
ω	138.5	6.7	2473	9	US-10-184-634-559	Sequence 559, App
4	134	6.5	708	9	US-10-174-590-584	Sequence 584, App
ъ	134	6.5	708	9	US-10-176-758-584	`
σ	134	6.5	708	9	US-10-175-737-584	Sequence 584, App
7	134	6.5	708	9	US-10-173-706-584	•
&	134	6.5	708	9	US-10-175-738-584	Sequence 584, App
9	134	6.5	708	9	US-10-175-752-584	Sequence 584, App
10	134	6.5	708	ø	US-10-176-482-584	Sequence 584, App
11	134	6.5	708	9	US-10-176-757-584	Sequence 584, App
12	134	6.5	708	9	US-10-176-913-584	•
13	134	6.5	708	9	US-10-180-552-584	`
14	134	6.5	708	9	US-10-180-557-584	Sequence 584, App
15	134	6.5	708	Q	US-10-173-700-584	•
16	134	6.5	708	9	US-10-174-572-584	Sequence 584, App
17	134	6.5	708	9	US-10-174-579-584	`
18	134	6. ₅	708	9	US-10-174-582-584	Sequence 584, App
19	134	ת	1	>	TTC-10-17/-500-50/	TOTAL COMPANY

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	
134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	
						б. 5																				
708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	
9	9	9	ဖ	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
US-10-176-911-584	US-10-176-756-584	US-10-176-493-584	US-10-176-487-584	US-10-176-485-584	US-10-176-481-584	US-10-175-747-584	US-10-174-586-584	US-10-174-585-584	US-10-174-576-584	US-10-173-705-584	US-10-173-697-584	US-10-173-695-584	US-10-184-658-584	US-10-176-993-584	US-10-176-992-584	US-10-176-991-584	US-10-176-987-584	US-10-176-985-584	US-10-176-750-584	US-10-176-747-584	US-10-176-492-584	US-10-176-488-584	US-10-175-743-584	US-10-175-740-584	US-10-175-739-584	
Sequence 584,		Sequence 584,																								
App	App :	App	App	App ·	App	App	- .																			

ALIGNMENTS

QY 216 CPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTL'(IRCCC 268	
Db 273 KDGVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVVSISIIE 323	
QY 157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKS-ATVNLTVIR 215	
Db 221 RTAPIQPRVWEPVPLEEVQLVVEPEGGAVAPGGTVTLTCEVPAQPSPQIHWM 272	
QY 115 LTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWE 156	
Db 164 LVPNEKGVSVKEQTRRHPETGLETLQSELMVTPARGGDPRPTFSCSFSPGLPRHRAL 220	
Qy 66 IITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY 114	
Db 124 PEIVDSASELTAGVPNKVGTCVSEGSYPAGTLSWHLDGKP 163	
QY 9 PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEP 65	
Query Match 7.0%; Score 145.5; DB 1; Length 405; Best Local Similarity 23.5%; Pred. No. 0.0034; Matches 91; Conservative 38; Mismatches 111; Indels 147; Gaps	
ORGANISM: Human US-08-755-235-4	
; LENGTH: 405 ; TYPE: PRT	
; SEQ ID NO 4	
, NUMBER OF SEQ ID NOS: 4	
; CURRENT FILING DATE: 1996-11-22	
; FILE REFERENCE: 0575/50159	
; TITLE OF INVENTION: METHOD FOR TREATING SYMPTOMS OF DIABETES	
, APPLICANT: Schmidt, Ann Marie	
; APPLICANT: Stern, David M.	
GENERAL INFORMATION	
; Sequence 4, Application US/08755235	
RESULT 1 US-08-755-235-4	•

```
Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo Sapien US-10-184-644-559
                                                                                                                                                                                                                                                                                                                                    US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-184-644-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 559
LENGTH: 2473
                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                Publication No.
                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 559, Application US/10184644 Publication No. US20030044930A1
           TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C217
                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
   CURRENT APPLICATION
                                                                            APPLICANT:
                                                                                              APPLICANT:
                                                                                                             APPLICANT:
                                                                                                                                  APPLICANT:
                                                                                                                                                  APPLICANT:
                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/184,644
CURRENT FILING DATE: 2002-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                         2308 -----ATTCCTCATCGCCCACCCCACCCCGGCCCCCACCACC 2344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC------
                                                                                                                                                                                                                                                                                                                                                                                                                                            243 WGKVGLGLAGTMLLTPTCTLTIRCCCCR-RRCCGCNCCCRCCFCC 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     391 -----QSEEPEAGESSTGGP 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             269 CRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQK 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       324 -PGEEG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTETASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                           559, Application US/10184634
                                                                                                                                                                                                                                                         Baker, Kevin P.
                                                                                      Smith, Victoria Watanabe, Colin K. Wood, William I.
                                                                       Zhang, Zemin
                                                                                                                                                  Pan, James
                                                                                                                                                               Gurney, Austin L.
                                                                                                                                                                                      Godowski, Paul
                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                          Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang,Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                  US20030068684A1
NUMBER: US/10/184,634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ------QRRGEERKAPENQEEEEERAELN----- 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 138.5; DB
Pred. No. 0.088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---PTAGSVGGSGLGTLALALGILGGLGTAALLIGVIL 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 2473;
```

```
Вb
                                                                                                                    Qy
                                                                                                                                                             В
    밁
                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo Sapien US-10-174-590-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: DNA ; ORGANISM: Homo Sapien US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-174-590-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prior application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 559
                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Publication No. US20030008352A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/174,590 CURRENT FILING DATE: 2002-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DATE: 2002-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
    187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC----
                                                                            132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                  123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243 WGKVGLGLAGTMLLTPTCTLTIRCCCCR+RRCCGCNCCCRCCFCC
                                                                                                                                                           72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                      20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                             14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                         Match 6.5%;
Local Similarity 23.7%;
STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                       SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----ATTCCTCATCGCCCACCCCACCCCGCCCCCACCACC 2344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/10174590
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.7%;
                                                                                                                                                                                                                                                                                                                       40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                         Score 134; DB 9; Length 708; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 138.5; DB Pred. No. 0.088;
                                                                                                                                                                                                                                                                                                                     Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 2473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         286
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                     10;
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-176-758-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: Homo Sapien US-10-176-758-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                              US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prior Application removed -
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Publication No.
                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                          Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                            Publication No.
                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/176,758
CURRENT FILING DATE: 2002-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Baker, Kevin P.
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
                                                  CURRENT APPLICATION NUMBER: US/10/175,737
CURRENT FILING DATE: 2002-06-19
                                                                                TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                      APPLICANT:
                                                                                                                                                      APPLICANT:
                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                      APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV------QVMGE 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SAVSILALTPOSNGTLTCVATWKSLKARKSATVNLTVIRCPODT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen, Jian
                                                                                                                                                                                                                                                        Desnoyers, Luc
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe, Colin K.
                                                                                                                                                                                                                        Gurney, Austin L.
                                                                                                                                                                                                                                          Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/10176758 b. US20030008353A1
                                                                                                                                      Zhang, Zemin
                                                                                                                                                  Wood, William I.
                                                                                                                                                                      Smith, Victoria Watanabe, Colin K.
                                                                                                                                                                                                        Pan, James
                                                                                                                                                                                                                                                                                            Chen, Jian
                                                                                                                                                                                                                                                                                                                                        Application US/10175737 o. US20030013153A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 134; DB 9
Pred. No. 0.045;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POLYPEPTIDES AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; LENGTH: 708
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-173-706-584
                                                     Вþ
                                                                                    Qy
                                                                                                                     Дb
                                                                                                                                                      Qy
                                                                                                                                                                                         B
                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                              US-10-173-706-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen, Jian
```

```
Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 584, Application US/10173706 Publication No. US20030022293A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 6.5%; Score 134; DB 9
Best Local Similarity 23.7%; Pred. No. 0.045;
Matches 53; Conservative 40; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/173,706
CURRENT FILING DATE: 2002-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
177 SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                               132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74 SQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                    123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                           14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                            72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                 74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                         20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                6.5%; Score 134; DB 9; 23.7%; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                      40;
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30;
                                                                                                                                                                                                                                                                                                                                                                                                                              30;
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                              10;
```

밁

187

STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230

```
Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρy
                                                                                                                                                                                                                                                                                                                                                                                       US-10-175-752-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo Sapien US-10-175-738-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-175-738-584
                                                                                                                                                                                                                                                                                                                                          Sequence 584, Application US/10175752 Publication No. US20030022295A1
                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 584, Application US/10175738 Publication No. US20030022294A1
                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
CURRENT APPLICATION NUMBER: US/10/175,752
                      TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C60
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/175,738 CURRENT FILING DATE: 2002-06-19
                                                                                                                              APPLICANT:
                                                                                                                                                      APPLICANT:
                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3430R1C45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187 STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            177 SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 6.5%; Score 134; DB 9; Length 708; Local Similarity 23.7%; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74 SQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV------QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR-----DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53; Conservative
                                                                                    Zhang, Zemin
                                                                                                                                                                                            Gurney, Austin L.
                                                                                                                                                                                                              Godowski, Paul J.
                                                                                                                                                                                                                                                        Desnoyers, Luc
                                                                                                        Wood, William I.
                                                                                                                            Watanabe, Colin K.
                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                Smith, Victoria
                                                                                                                                                                        Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10;
```

```
δÃ
                                                                                                         ρy
                                                                                                                                                   Ъ
                                                                  В
                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo Sapien
US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo Sapien US-10-175-752-584
                                                                                                                                                                                                                                                                                                                                                                                    Prior Application removed - See File Wrapper
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 584, Application US/10176482 Publication No. US20030022296A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/176,482
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT FILING DATE: 2002-06-19
Prior Application removed - See |
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 187 STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         177 SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                           72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV------QVMGE 122
                                                                                                                                                                                      14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                            20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 SQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----OVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 SGSGNEVIEGPQNATYLKGSQARFNCTVSQGWKLIMWALSDMYVLSVRPMEPII(NDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
les 53; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                    53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-06-20
                                                                                                                                                                                                                                                      6.5%; Score 134; DB 9
23.7%; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.5%; Score 134; DB 9
23.7%; Pred. No. 0.045;
                                                                                                                                                                                                                                40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    See File Wrapper or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40;
                                                                                                                                                                                                                                Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                          DB 9; Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 9; Length 708
                                                                                                                                                                                                                                                                                                                                                                                                                                               or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           101;
                                                                                                                                                                                                                                  30;
                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
```

밁

```
US-10-176-913-584
                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LENGTH: 708
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-176-757-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                           GENERAL INFORMATION
                                                                                                                                                                                                                                                                 Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 584, Application US/10176757 Publication No. US20030022297A1
                                                                                                                                                                                                                                              Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                      APPLICANT:
                                                                                                                                                              APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian APPLICANT: Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/176,757
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                               APPLICANT:
                                                                                APPLICANT:
                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                                                                                                                                                                                                                                                                                                                                 132 --- PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     132 --- PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                   STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                           SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                               Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                   Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                             Smith, Victoria
                                                                                Pan, James
                                                                                                                                                                                                                                            Application US/10176913 o. US20030022298A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 134; DB 9;
Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
```

```
δÃ
                                                                 В
                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TYPE: PRT; ORGANISM: Homo Sapien US-10-176-913-584
                                                                                                                                                                                                                                      US-10-180-552-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-180-552-584
                                                                                                                                                                                                                                                     SEQ ID NO 584
LENGTH: 708
TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prior Application removed - See file Wrapper or Palm
NUMBER OF SEO ID NOS: 612
SEO ID NO 584
LENGTH: 708
                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 584, Application US/10180552 Publication No. US20030022300A1
                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: P3430R1C153
CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT FILING DATE: 2002-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/176,913
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                          Prior Application removed NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187 STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----
                                                                 20
                                                                                                        14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.5%; Score 134; DB 9; 23.7%; Pred. No. 0.045;
                                                                                                                                                                     6.5%; Score 134; DB 9; 23.7%; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                         See File Wrapper or
                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                   Mismatches
                                                                                                                                                 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  101;
                                                                                                                                                                                        Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.;
                     -QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                               Gaps
                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10;
```

В

72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT; ORGANISM: Homo Sapien US-10-180-557-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-180-557-584
                                                                                                                                                                                                      US-10-173-700-584
                                                                                                                                                                                                                             RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                           Sequence 584, Application US/10173700 Publication No. US20030027262A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 584, Application US/10180557
Publication No. US20030022301A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3430R1C147
CURRENT APPLICATION NUMBER: US/10/180,557
CURRENT FILING DATE: 2002-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                    APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Baker, Kevin P.
                     APPLICANT:
                                          APPLICANT:
                                                             APPLICANT:
                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                        132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTEGSVE 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                       187 STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                               177 SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                              123 LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                       72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV------QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                   Godowski, Paul J. Gurney, Austin L.
                                                         Desnoyers, Luc
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe, Colin K. Wood, William I.
Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6.5%;
23.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 134; DB 9
Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
```

```
; ORGANISM: Homo Sapien US-10-173-700-584
В
                                                                                 DЬ
                                                                                                                    δÃ
                                                                                                                                                                В
                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                      ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/173,700 CURRENT FILING DATE: 2002-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhang,Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
187
                                       177
                                                                                 132 ---PSVSLVA--GVPANLTCRSRGDARPTPELLWFRDGVLLDGATFHQTLLKEGTPGSVE 186
                                                                                                                        123
                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                       74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                         14 SGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                  Local Similarity es 53; Conserv
STLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                       SAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                      LFIPSVNLVVAENEPCEVTCLPSHWTR-LPDISW-ELGLLVSHSSYY--FVPE--PSDLQ 176
                                                                                                                                                              WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                   AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                    6.5%;
23.7%;
                                                                                                                                                                                                                                                                                                                                    40; Mismatches 101;
                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                      Score 134; DB 9; Length 708; Pred. No. 0.045;
                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                    30;
                                                                                                                                                                                                                                                   --DLPG 71
                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                    10;
```

Search completed: April 29, 2003, 20:17:34 Job time: 27.0659 secs

```
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: Maximum DB seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
       Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
     109.5
109.5
109.5
109.5
                                                                           111
109.5
109.5
109.5
                                                                                                                                                                                                                                                                                                    124.5
124.5
123.5
123.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-729-264-6
2077
1 MERHILITVPEAVGSGSGNEV......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 28, 2003, 18:14:43 ; Search time 14.0485 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5:1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
       ᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲡᲑᲑᲑᲑᲑ
       /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length DB
     8669
8669
3322
3441
5344
5344
5344
68868
8668
86668
886668
US-08-374-834-1
US-08-644-271-1
US-09-077-955-1
US-09-540-245A-15
US-09-540-245A-15
US-09-540-245A-15
US-09-272-496-2
US-09-651-200-20
PCT-US95-08493-15
PCT-US95-08493-21
US-08-445-640-2
US-08-445-640-2
US-08-447-314-2
                                                                                                                                                                                                                                                           US-09-062-365-1

US-09-651-200-2

US-09-651-200-6

US-09-651-200-6

US-09-651-200-24

US-08-633-148-2
                                                                                                                                                                                                                                                                                                                                                                                           US-08-374-834-16
US-08-644-271-29
US-09-077-955-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-041-886-25
PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-977-767-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808.430 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                         Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
     Sequence
                         Sequence
                                        Sequence
                                                              Sequence
                                                                             Sequence
                                                                                             Sequence
                                                                                                                  Sequence
                                                                                                                                 Sequence
                                                                                                                                                     Sequence
                                                                                                                                                                      Sequence
                                                                                                                                                                                      Sequence
                                                                                                              3, Appli
2, Appli
16, Appli
16, Appli
17, Appli
18, Appli
19, Appli
10, Appl
15, Appl
19, Appl
21, Appl
2, Appli
2, Appli
2, Appli
2, Appli
```

1, Appli	Sequence :	US-08-554-612C-1	1	879	5.0	104.5	45
16, Appl	Sequence :	US-09-540-245A-16	4	1381	5.1	105	44
17, Appl	Sequence	US-09-540-245A-17	4	1297	5.1	105	43
2, Appli	Sequence :	us-09-553-132-2	4	690	5.1	105	42
2, Appli	Sequence 2	US-08-935-433-2	4	690	5.1	105	41
2, Appli	Sequence	US-08-928-383B-2	4	365	5.1	105	40
5, Appli	Sequence 6	US-09-254-465A-6	4	319	5.1	105	39
57, Appl	Sequence 6	US-09-336-536-67	4	319	5.1	105	38
22, Appl	Sequence	US-09-068-051A-22	4	319	5.1	105	37
22, Appl	Sequence 2	US-08-597-495B-22	щ	319	5.1	105	36
6, Appli	Sequence 6	US-07-906-349A-6	Н	801	5.1	106	35
13, Appl	Sequence :	PCT-US95-08493-13	Ç,	946	5.1	106.5	34
5, Appli	Sequence 6	US-08-415-751-6	\vdash	362	5.2	107.5	ယ
l, Appli	Sequence :	US-09-417-381A-1	4	911	5.3	109.5	32
l, Appli	Sequence :	US-08-440-816A-1	N	911	5.3	109.5	31
l, Appli	Sequence 1	US-08-441-104A-1	N	911	5.3	109.5	30
l, Appli	Sequence 1	US-08-286-305A-1	\vdash	911	5.3	109.5	29
2, Appli	Sequence	US-08-445-461-2	ω	890	5. ω	109.5	28

ALIGNMENTS

RESULT 1 US-08-977-767-3

```
CLONE: 08-977-767-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/08977767 Patent No. 5972684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Bandma
                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/977,767
FILING DATE: Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Greenwald, Sara
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: CARBONIC ANHYDRASE VIII
NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
                                                                                   TOPOLOGY: line IMMEDIATE SOURCE:
                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                 MMEDIAL
LIBRARY: General
CONF: 1532042
                                                                                                                                         LENGTH:
TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 3174 POI
CITY: Palo Alto
                                                                                                                 TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                              TELEFAX: 650-845-4166
                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Incyte Pharmaceuticals, Inc. 3174 Porter Drive
                                                                                                                                                          1345 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yue, Henry
Greenwald, Sara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bandman, Olga
                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diskette
                                                                                                                    single
                                                                                                                                                                                                                                                                                    PF-0423
Length 1345;
```

Query Match

6.28;

Score 128.5;

DB 2:

```
da
                                     Q
                                                                            밁
                                                                                                           Qy
                                                                                                                                                밁
                                                                                                                                                                                ρy
                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                               US-09-041-886-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-041-886-25
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 25, Application US/09041886 Patent No. 6235872
                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: P-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
 383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----VLPS 430
                                 173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS
                                                                                                    114 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 4...
STREET: 4...
CTTY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                      324 ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG 382
                                                                                                                                                279 VI-----
                                                                                                                                                                                                                220 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          456 CGTGAAGAGGGTCCTCTATGACCCCCTTCCTGCCCCCCTCTGAGACTCAGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414 GTCTCTGT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190 GTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGI----NIPGVLSSLPSLGFSLPTWGK 245
                                                                                                                                                                            56 VYLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 113
                                                                                                                                                                                                                                                       14 SGSGNEV-----
                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246 VGLGLAGTMLLT-PTCTLTIRCCCCRRRCCGCNCCCRC------CFCC 286
                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                          60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                1447 amino acids
                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rabizadeh, Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bredesen, Dale E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                           -QLRSKKYSLLGG---SNLLISNYTDDDSGMYTCVVTYKNENISASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Proapoptotic Peptides, Dependence Polypeptides and Methods of Use : 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                  6.2%; Score 128; DB 4; Length 1447; 24.8%; Pred. No. 0.012; tive 33; Mismatches 99; Indels 5
                                                                                                                                                                                                                                                   ------IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----GC-CGTGGGAAGCGTCAGAGCCCCGTGGATGTGGA 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 0.0098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                      50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33;
                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                           323
                                                                                                                                                                                                                                                                                    10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                    Ç QY
Дb
                                 QΥ
                                                                    Вb
                                                                                                                                           В
                                                                                                                                                                          δÃ
                                                                                                                                                                                                                В
                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Applicat GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202.508.9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Kagan, Sarah A.
REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
431 AP 432
                                                                                                                                           324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                 233 LP 234
                                                                 383 SNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS---
                                                                                                173 SDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSS 232
                                                                                                                                                                         114 YLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                            279 VI-----QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNENISASA 323
                                                                                                                                                                                                                                                                                 220 SRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTWLRGEE 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431 AP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  233 LP 234
                                                                                                                                                                                                                                             56 VVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSRLHGSA 113
                                                                                                                                                                                                                                                                                                                  14 SGSGNEV-------IEGPQNATVLKGSQARFNCTVSQGW--KLIMWALSDM 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET: 1001 6 50
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 202.508.9299
TELEX: 197430 BBMB UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                       ELTVLVPPWFLNHPSNLYAYESMDIEFECTVS-GKPVPTVNWMKNGDVVIPSDYFQIVGG 382
                                                                                                                                                                                                                                                                                                                                                       60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application PC/TUS9405277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1447 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001 G Street, N.W.
                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vogelstein, Bert
Zabrecky, James R.
VENTION: Antibodies Specific for DCC Gene Product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kinzler, Kenneth W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bruskin, Arthur
Jarosz, David E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Johnson, Karen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Banner,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                        6.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Birch, McKie & Beckett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT/US94/05277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32,141
                                                                                                                                                                                                                                                                                                                                                       33;
                                                                                                                                                                                                                                                                                                                                                                    Score 128; DB 5
Pred. No. 0.012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01107.42709
                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                         DB 5; Length 1447;
                                                                                                                                                                                                                                                                                                                                                     99;
                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                     50;
                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
RESULT 4
US-08-374-834-16
                                                                                                                                                                   ρy
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
Q
                                                                                õ
                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-374-834-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 16, Application US/08374834 Patent No. 5656473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: REFERENMUNICATION INFORMATION:
TELEPHONE: (914) 345-7400
TELEFAX: (914) 345-7721
INFORMATION FOR SEQ ID NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: ...
STREET: ...
CITY: Tarrytown
CITY: New York
"TCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 0 FILING DATE: 21-JUL-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------SPLRENSRIAVLE- 171
328 TETASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASFNLA 375
                                                                                                                                                                                                                                                                                                                                            137 P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                    172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV 223
                                          389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                                                                             336 FLNTSYADPEEAQELLVHTAWNEL------KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                                                                                                                                                                                                                                                                                 224 TFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Cobert, Robert J. REGISTRATION NUMBER: 36,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                            78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                         SNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG------INIPGVLSSLP 234
                                                                                ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                --GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             777 Old Saw Mill River Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Regeneron Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                      ----PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/374,834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 08/095,658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51; Mismatches 176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 127.5; DB Pred. No. 0.0065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

277

277

19;

```
В
                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-644-271-29
                                                                                                          Ş
                                                                                                                                                    밁
                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                           δÃ
  밁
                                  Qy
                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-644-271-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No. 5814478
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 29,
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Valenzuela, et al.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS
TITLE OF INVENTION: AND LIGANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: USSN 60/008,657
FILING DATE: 15-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS LENGTH: 869 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 914-345-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Cobert, Robert 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  445 TACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: |
                                                                                                                                                                                                                                                                                                       122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----SPLRENSRIAVLE- 171
336 FLNTSYADPEEAQELLVHTAWNEL------KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                                                          278
                                                                                                                                                                                                                            172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV 223
                                                                                                              188 SNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG-----INIPGVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0 FILING DATE: 10-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Tarrytown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                  78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                                                                                                                                                                                                             19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Cobert, Robert REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                      TFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP- 277
                                      SLGFSL----
                                                                          --GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                                                                                                                                                                                                                                                                                                     86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΥN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/08644271
                                                                                                                                                                                          ----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               777 Old Saw Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       869 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      914-345-7721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Regeneron Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diskette
                                    ----PTWGKVGLGLAGTMLLTPTCTLTTRCCCCRRRCCGCN-----
                                                                                                                                                                                                                                                                                                                                                                                                     6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/644,271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29:
                                                                                                                                                                                                                                                                                                                                                                                   ; score 127.5; DB 2;
; Pred. No. 0.0065;
51; Mismatches 176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195A
                                                                                                                                                                                                                                                                                                                                                                                                                         Length 869;
                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                       99;
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                          277
```

```
US-09-062-365-1
                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-077-955-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-077-955-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                     GENERAL
                                                                       Sequence 1, Application US/09062365 Patent No. 6465422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 33
LENGTH: 869
APPLICANT: Stern, David
                      APPLICANT: Schmidt, Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 33, Application US/09077955A Patent No. 6413740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/077,955A
CURRENT FILING DATE: 1998-09-10
EARLIER APPLICATION NUMBER: PCT/US96/20696
EARLIER FILING DATE: 1996-12-13
EARLIER APPLICATION NUMBER: 08/644,271
EARLIER FILING DATE: 1996-05-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER FILING DATE: 1995-12-15
NUMBER OF SEQ ID NOS: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Valenzuela et al., David M.
TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS AND LIGANDS
FILE REFERENCE: REG195-B-PCT-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 60/008,657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Homo sapiens
                                                                                                                                                                                                                     445 TACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                            278 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT
                                                                                                                                                                                                                                                                                                                                                                                                               336 FLNTSYADPEEAQELLVHTAWNEL-----KVVSPVCRPAAEALLCNHIFQECSPGVVP 388
                                                                                                                                                                                                                                                                   328 TETASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASFNLA 375
                                                                                                                                                                                                                                                                                                                 389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188 SNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG-----INIPGVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            224 TFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKDRVIDSRLQLFITKP-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEVEVFARILRAPESHNV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD-----SPLRENSRIAVLE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                235 SLGFSL-----PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   445 TACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSSSSSFSVS 489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            328 TETASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHPQASFNLA 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               389 TPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLLSVPECSKLPSMHWDP 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             278 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 136
                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQYRGEVCNAVLAKDALV 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.1%; Score 127.5; DB 4; 20.9%; Pred. No. 0.0065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51; Mismatches 176; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99;
                                                                                                                                                                                                                                                                                                                                                                 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
```

```
δÃ
                                              DЬ
                                                                                                                                                                                                                          US-09-651-200-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-651-200-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Human US-09-062-365-1
                                                                                                                                Matches 77;
                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                             SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Green et al TITLE OF INVENTION: Polynucleotides Encoding Members of the Human TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62) CURRENT APPLICATION NUMBER: US/09/651,200 CURRENT FILING DATE: 2000-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1999-1 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1999-
                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/062,365 CURRENT FILING DATE: 1998-04-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: METHOD FOR INHIBITING TUMOR INVASION OR SPREADING IN A TITLE OF INVENTION: SUBJECT FILE REFERENCE: 55424
                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 33
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                        LENGTH: 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115 LTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142 LVPNEKGVSVKEQTRRHPETGLETLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLL 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102 PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG------KP 141
      67
                                              48
                                                                                14 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPMEPI 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66 IITNDRETS-----QRYDQGGNET--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 25.(es 70; Conservative
                                         SPTGAVEVQVPEDPVVALVGTDATLHCSFSPEPGFSLTQLNLIWQLTDTKQLV----- 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE- 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       332
                                                                                                                                                                                                                                                                                                                                    PatentIn Ver. 2.0
                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----PTAGSVGGSGLGTLAL 321
                                                                                                                                                                                                                                                                                                                                                                                2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                       1999-12-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.1%; Score 127; DB 4; 25.0%; Pred. No. 0.0019;
                                                                                                                                                   6.0%; Score 124.5; DB 21.2%; Pred. No. 0.0033;
                                                                                                                                                                                                                                                                                                                                                                                                                                            60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/152383
                                                                                                                              51; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
----TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 332;
                                                                                                                                                                     DB 4; Length 340;
                                                                                                                              127; Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                              17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15;
```

DЬ 20

Вþ Qy

```
₽
                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               80
                                      δÃ
                                                                                      В
                                                                                                                          δõ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens US-09-651-200-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-651-200-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Green et al
APPLICANT: Green et al
TITLE OF INVENTION: Polynucleotides Encoding Members of the Human
TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and
TITLE OF INVENTION: Polypeptides Encoded Thereby
FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
PRIOR APPLICATION NUMBER: 60/152383
PRIOR APPLICATION NUMBER: 60/152383
PRIOR FILING DATE: 1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/172909
PRIOR FILING DATE: 1999-12-21
PRIOR APPLICATION NUMBER: 60/183578
PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
  357
                                                                                                                                 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                             202 ---HSFTEGR-DQGSAYANRTALFPDLLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS
                                                                                                                                                                                                                                                                                                           67
                                                                                                                                                                                                                                                                                                                                                                          14 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPMEPI 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                            SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP----QDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS
HGSVTITGQPMTFPPEAL---
                                        GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC 280
                                                                                      VTTSQMANEQGLFDVHSVLRVVLGANGTYSC----
                                                                                                                                                                                                                AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 163
                                                                                                                                                                                                                                                                                                    ITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                               SPTGAVEVQVPEDPVVALVGTDATLHCSFSPEPGFSLTQLNLIWQLTDTKQLV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALAFYCWRK-----IKQSCEEENAGAEDQDG-----EGEGSKTALQPLKHSDS 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VTTSQMANEQGLEDVHSVLRVVLGANGTYSC---
                                                                                                                                                                       AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEDD 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTETASLPPKSCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP---QDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AYLTYQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 163
                                                                                                                                                                                                                                                                                                                                                                                                                                     1. Similarity 21.2%; Pred. No. 0.0047; 77; Conservative 51. Winner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative 51; Mismatches 127; Indels 109;
  -WVTVGLSVCLIALLV---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----LVRNPVLQQDA 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 441;
                                                                                 -LVRNPVLQQDA
                                                                                                                                                                                                                                                           256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             155
  389
                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                          17;
```

```
SOFTWARE: PatentIn Ver.
SEQ ID NO 6
LENGTH: 534
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-651-200-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/09651200 Patent No. 6429303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Green et al APPLICANT: Green et al TITLE OF INVENTION: Polynucleotides Encoding Members of the Human TITLE OF INVENTION: Lymphocyte Activation Antigen B-7 Family and TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 15966-562 (CURA-62)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 15966-562 (CURA-62)
CURRENT APPLICATION NUMBER: US/09/651,200
CURRENT FILING DATE: 2000-08-30
PRIOR APPLICATION NUMBER: 60/152383
PRIOR FILING DATE: 1999-09-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1999-12-21
526 KEDD 529
                                                                                                    483
                                                                                                                                                                                                     450
                                                                                                                                                                                                                                                                                                         408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            390
                                                  341 SDPE 344
                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242 SPTGAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLV----- 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295 ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPMEPI 66
                                                                                                                                                   RCCFCCRRKRGFRIOFOKKSEKEKTNKETETESGNENSGYNSDEOKTTETASLPPKSCES 340
                                                                                                    ALAFVCWRK-----IKQSCEEENAGAEDQDG----
                                                                                                                                                                                                                                                                                                                                      SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP----QDT 220
                                                                                                                                                                                                                                                                                                                                                                                                           AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALAFVCWRK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTETASLPPKSCES 340
                                                                                                                                                                                                     HGSVTITGQPMTFPPEAL ---
                                                                                                                                                                                                                                                    GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC 280
                                                                                                                                                                                                                                                                                                         VTTSQMANEQGLFDVHSVLRVVLGANGTYSC------LVRNPVLQQDA 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            --- IKQSCEEENAGAEDQDG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.9%; score 123.5; DB 4; 21.2%; Pred. No. 0.0076; ative 50; Mismatches 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/172909
                                                                                                                                                                                                     -WVTVGLSVCLIALLV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches 128; Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---EGEGSKTALQPLKHSDS 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                     482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17;
```

US-09-651-200-24

Sequence 24, Application US/09651200 Patent No. 6429303

В

Qy B

Db Qy В Ş

В

Qγ B δÃ

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q<sub>y</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                              US-08-633-148-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-651-200-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Pat
SEQ ID NO 24
LENGTH: 534
                                                                                                                                                                                                                        Sequence 4, Application US/08633148 Patent No. 5864018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Green et
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
FILE REFERENCE: 1596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Polypeptides Encoded Thereby FILE REFERENCE: 1596-562 (CURA-62) CURRENT APPLICATION UNMBER: US/09/651,200 CURRENT FILING DATE: 2000-08-30 PRIOR APPLICATION NUMBER: 05/152383 PRIOR FILING DATE: 1999-09-03 PRIOR APPLICATION NUMBER: 60/172909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1999-12-21 PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 2000-02-18
                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Unknown Organism: Sequence OTHER INFORMATION: mz5020.protein\ from\ Figure\ 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
    CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP
STREET: TWO EMBARCADERO CENTER, 8TH FLOOR
CITY: SAN FRANCISCO
                                                                                                 APPLICANT: NACASHIMA, MARIKO
APPLICANT: HOLLANDER, DORIS A.
TITLE OF INVENTION: ANTHODIES TO ADVANCED GLYCOSYLATION
TITLE OF INVENTION: END-PRODUCT RECEPTOR POLYPEPTIDES AND USES THEREFOR
                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                   341
                                                                                                                                                                                                                                                                                                                                            526 KEDD 529
                                                                                                                                                                                                                                                                                                                                                                                                                       483 ALAFVCWRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 450 HGSVTITGQPMTFPPEAL----WVTVGLSVCLIALLV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221 GGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              408 VTTSQMANEQGLEDVHSVLRVVLGANGTYSC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 164 SSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCP----QDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          350 AAVSLQVAAPYSKPSMTLEPNKDLRPGDTVTITC--SSYRGYPEAEVFWQDGQGVPLTGN 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113 AYLTVQVMGELFIPSVNLV----VAENEPCEVTCLPSHWTRLP--DISWELGL---LVSH 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     295 ---HSFTEGR-DQGSAYANRTALFPDLLAQGNASLRLQRVRVADEGSFTCFV-SIRDFGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242 SPTGAVEVQVPEDPVVALVGTDATLRCSFSPEPGFSLAQLNLIWQLTDTKQLV------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 ITNDRFTSQRYDQGGNF------TSEMIIHNVEPSDSGNIRCSLQNSRLHGS 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 SGSGNEVIEGPQNATV-LKGSQARFNCTVS--QGWKL----IMWALSDMVVLSVRPMEPI 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity les 77; Conserv
                                                                                                                                                                                                                                                                                                                                                                                   SDPE 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTETASLPPKSCES 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Green et al
                                                                                                                                                                               MORSER, MICHAEL J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polynucleotides Encoding Members of the Human B Lymphocyte Activation Antigen B-7 Family and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25
                                                                                                                                                                                                                                                                                                                                                                                                                       IKQSCEEENAGAEDQDG------EGEGSKTALQPLKHSDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/183578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 123.5; DB 4;
Pred. No. 0.0076;
0; Mismatches 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------LVRNPVLQQDA 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17;
                                                                                                                                                                                                                                                                                                                                                            RESULT 13
US-08-633-148-2
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-633-148-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: MORSER, MICHAEL J.
APPLICANT: NAGASHIMA, MARIKO
APPLICANT: HOLLANDER, DORIS A.
TITLE OF INVENTION: ANTIBODIES TO ADVANCED GLYCOSYLATION
TITLE OF INVENTION: END-PRODUCT RECEPTOR POLYPEPTIDES AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                        NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND & TOWNSENT & CREW LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115
                                                                                                   STREET: TWO EMBARCADERO CENTER, 8TH FLOOR CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                              ZIP:
                                                             COUNTRY:
                                                                                 STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                            PGEEG---
                                            94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . Similarity 69; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALIFORNIA
                                                                                   CALIFORNIA
                                                               U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                 END-PRODUCT RECEPTOR POLYPEPTIDES AND USES THEREFOR 23
```

```
Sequence 2, Application US/08633148 Patent No. 5864018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               142 LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: MURPHY ESQ., MATTHEW B. REGISTRATION NUMBER: 39,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: PC-DOS/MC-SOFTWARR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66 IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/0 FILING DATE: 16-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 PEAVGSGSGNEVIEGPONATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                          LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                             RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM 250
                                                                                                                                                                                                                                                                                                                                                                                                                  LTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                             KD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               318 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.9%; Score 122; DB 2
24.9%; Pred. No. 0.005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/633,148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          014618-005600US
                                                                                                                                                             -PTAGSVGGSGLGT 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2; Length 318;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-374-834-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-633-148-2
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08374834 Patent No. 5656473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                             STREET: Tarrytown CITY: Tarrytown STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 326-2400 TELEFAX: (415) 326-2422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION: NAME: MURPHY ESQ., MATTHEW
                                                                                                                                                                       COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              323 PGEEG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                217 PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273 KD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115 LTVQVMGELFIP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164 LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124 PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG-------KP 163
                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66 IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 16-AP
                                    APPLICATION NUMBER: US/08/374,834 FILING DATE: 19-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                    CLASSIFICATION:
                                                                                                                                                       MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH:
                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69;
                                                                                                                                                                                             1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          amino acid
                                                                                                                                                                                                                                                                        777 Old Saw Mill River Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340 amino acids
                                                                                                                                                                                                                                                                                                                                                Valenzuela, et al.
VENTION: NOVEL TYROSINE KINASE RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patentin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S: single
linear
                                                                                                                                                                                                                                                                                      Regeneron Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08/633,148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39,787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                014618-005600US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 122; DB.2; Pred. No. 0.0055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -PTAGSVGGSGLGT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15;
```

```
DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QY
                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-08-644-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-374-834-1
                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/08644271 Patent No. 5814478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Valenz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (914) 345-7721 INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
CURRENT APPLICATION DATA:
                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                                                                             432 PECSKLPSMHQDPTAC 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 328 TETASLP----PKSC 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  336 FFNTSYPDPEEAQELLIHTAWNEL------KAVSPLCRPAAEALLCNHLFQECSPGVLP 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGDSALRE-----NSRIAVLE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       224 TFGSFVTLRCTAIGMP-----VPTISWIENGNAVSSGSIQENVKDRVIDSRLQLFITKP- 277
                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: ur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                                                                 COUNTRY:
                                                                                                                                                     STATE:
                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 5.5%; Score 114; DB Local Similarity 21.3%; Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                   SOFTWARE:
                                                                         MEDIUM TYPE:
                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPMPICREYCLAVKELFCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SNGTLTCVAT----WKSLKARKSATVNLTVIR------CPQDTGGGINIPGVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVFARILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          --GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKESKGYCAQYRGEVCDAVLVKDSLV 335
                                                                                                                 10591
                                                                                                                                                     Tarrytown
: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cobert,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         868 amino acids
                                                                                                                                                                                          777 Old
                                                                                                                                 USA
                                                                                                                                                                                                                                                                                    Valenzuela, et al.
VENTION: NOVEL TYROSINE KINASE RECEPTORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                 FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                          Regeneron Pharmaceuticals, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (914)
                                                                         Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , Robert J.
, Robert J.
758: 36,108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1993
                                                                                                                                                                                        Saw Mill Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345-7400
                                                                                                                                                                                                                                                                  AND LIGANDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      us 08/095,658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEWLAMEGKTHRGLYRSGMHF--LPV 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        277
```

```
ρ
                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                  Š
Search completed: April 28, 2003, 21:12:23 Job time: 18.0485 secs
                                                                                                밁
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: protein US-08-644-271-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 5.5%; Score 114; DB 2; Length 868; Best Local Similarity 21.3%; Pred. No. 0.1; Matches 80; Conservative 40; Mismatches 150; Indels 106; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/644,271
FILING DATE: 10-MAY-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: USSN 60/008,657
FILING DATE: 15-DEC-1995
ATTORNEY/ACENT INFORMATION:
NAME: Cobert, Robert J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Cobert, Robert J
REGISTRATION NUMBER: 36,108
REFERENCE/DOCKET NUMBER: REG
TELECOMMUNICATION INFORMATION:
TELEPHONE: 914-345-7400
TELEFAX: 914-345-7721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 868 amino acids
TYPE: amino acid
                                                                                                                                           328 TETASLP-----PKSC 338
                                                                                                                                                                                          389 TPMPICREYCLAVKELFCA---
                                                                                              432 PECSKLPSMHQDPTAC 447
                                                                                                                                                                                                                                      278 ----CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                                                                                      336 FFNTSYPDPEEAQELLIHTAWNEL------KAVSPLCRPAAEALLCNHLFQECSPGVLP 388
                                                                                                                                                                                                                                                                                                                                     235 SLGFSLP----
                                                                                                                                                                                                                                                                                                                                                                                 278 -- GLYTCIATNKHGEKFSTAKAAATVSIAEWSKSQKESKGYCAQYRGEVCDAVLVKDSLV 335
                                                                                                                                                                                                                                                                                                                                                                                                             224 TFGSFVTLRCTAIGMP-----VPTISWIENGNAVSSGSIQENVKDRVIDSRUQLFITKP- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         137 P-----CEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQ 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         172 -----SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKLVKLEVEVFARILRAPESHNV 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122 KITRPPINVKIIEGLKAVLPCTIMGNPKPSVSWIKGDSALRE-----NSRIAVLE- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78 DQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMGELFIPSVNLVVAENE 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 EVIEGPQNATVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRPMEPIITNDRFTSQRY 77
                                                                                                                                                                                                                                                                                                                                     -----TWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN----- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REG 195A
```

GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             April 28, 2003, 16:24:31; Search time 38.4662 Seconds (without alignments) 1337.141 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MERHLLTVPEAVGSGSGNEV...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-729-264-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
                                                                                                                                                                                                                                                            /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1996.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1998.DAT:*
\( \subset \) \(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .......HPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               908470
```

score greater than or equal to the score or the result well and is derived by analysis of the total score distribution. Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

S
a
X
Š
æ
\vdash
н

No.	Score	Match Length DB	Length	8	ID		Description
, <u>L</u>	2077	100.0	386	23	AAU75542		Human B7-like
N	2014	97.0	382	23	AAU75540		Human B7-like
ω	2000	96.3	386	23	AAU75541		Human B7-like
4	1514	72.9	377	23	AAU75543	-	Human B7-like
ហ	1326	63.8	463	22	ABG28169		Novel human d
6	928.5	44.7	370	23	AAU75544		Mouse B7-like
7	587.5	28.3	631	23	AAU75547		Rat B7-like p
00	579.5	27.9	270	23	AAU75545		Mouse B7-like
9	498	24.0	223	23	AAU75546		Mouse B7-like
10	151	7.3	404	22	AAB81925		Extracorporeal cir

ite can	ABG61942	23	1070	6.0	125	5
colon	AAW08747	18	1070	•	125	14
acid	AAB68421	22	869	•	125.5	Ω
n of mus	AAG77856	22	869	•	125.5	2
protein	5	22	576	•	125.5	H
	AAG77857	22	537	6.0	125.5	Ö
Recep	AAY52130	21	332	•	126	39
e Nskž (a)	AAW62572	19	881		127.5	8
receptor	AAR84091,	17	881	6.1	127.5	
rnatively	AAW62573	19	873	•	127.5	36
receptor	AAR84092	17	873	٠	127.5	
e receptoi	AAW62568	19	871		127.5	4
г,	AAR84087	17	871	•	127.5	ω
	AAW26506	18	869	•	127.5	2
		18	869	6.1	127.5	31
Mouse receptor tyr		19	867	•	ν	ö
ъ.		19	863		N	29
Nsk2 extracellular		17	475	•	127.5	8
		19	467		N	27
	AAU84351	23	1953	5.2	128	26
ed in		12	1728	٠	128	25
UNC-		22	1447		128	24
Human DCC protein.		20	1447		128	23
Œ		16	1447		128	22
		22	344		133.5	21
-		23	708		134	20
PRO polypep		22	708		134	19
		23	594		134	18
		23	592		134	17
peroxidasi		22	1498		135	16
		21	1496		135	15
oma as		20	1496	•	135	14
RAGE prot	AAM487	23	404		151	3
receptor f	AAU7754	23	404		151	12
Human receptor for	AAE23	23	404		151	Ξ

ALIGNMENTS

AA AA	AU75542	SULT	
AAU75542	N	1	
standard;			
Protein;			

386 AA.

Human B7-like protein, B7-L_h3.

23-APR-2002 (first entry)

AAU75542;

antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder. Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;

Homo sapiens.

WO200200710-A2

03-JAN-2002

28-JUN-2001; 2001WO-US20719

28-JUN-2000; 2000US-214512P. 28-NOV-2000; 2000US-0729264.

(AMGE-) AMGEN INC.

Welcher AA, Sarmiento UM, Schultz HJ, Chute HT;

```
밁
                                           Ş
                                                                                              멍
                                                                                                                                  δõ
                                                                                                                                                                              . 말
                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seminal vesicle hyperplasia in transgenic mice overexpressing B7-L
compeptide. Hence modulators of (I) are useful for the treatment of
cancer including seminal vesicle cancer, lung, brain, breast, ovarian,
cesticular cancer and cancers of haematopoietic system. B7-L polypeptide
pathway can be manipulated to regulate cytotoxic T-lymphocyte response
in allograft transplantation, graft versus host disease, T-cell
dependent B-cell mediated diseases and autoimmune diseases. B7-L
molecules are useful for alleviating the symptoms associated with
diseases involving chronic immune cell dysfunction or to treat
autoimmune diseases such as systemic lupus erythematosus, rheumatoid
arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
purpura and psoriasis, chronic inflammatory disease such as
inflammatory bowel disease (Crohn's disease and ulcerative colitis),
Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigold), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of human B7-L_h3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 13; Fig 3; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; ABK13030.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                useful for enhancing the immune response to tumours. (I) plays a growth and maintenance of cancer cells based on the observation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
241 PTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKS
                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                     1 MERHLLTVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-130881/17.
                                                                                                                                                                                                                                                                                                         RPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM 120
                                                                                                                                            ILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSL
                                                                                                                                                                                          GELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVS
                                                                                                                                                                                                                                                                                                                                                                               MERHLLTVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSV
                                                                                              ILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSL
                                                                                                                                                                                                                                                                                     RPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 2077; DB 23; Pred. No. 1.9e-164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                            180
                                                  300
                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
RESULT 10
AAUT510
IID AAUT510
XX AAUT510
AX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                        The invention relates to an isolated B7-like (B7-L) polypeptide (I).

CC The polypeptide, polynucleotide encoding it and antibody against (I) are

CC useful for treating B7-like polypeptide-related disease, disorders or

CC conditions including reproductive disorders (e.g. infertility,

CC miscarriage, preterm labour and delivery and endometriosis) and

CC proliferative disorders. Antibodies, soluble proteins comprising

CC extracellular domains and other regulators of B7-L polypeptides are

CC useful for enhancing the immune response to tumours. (I) plays a role in

CC growth and maintenance of cancer cells based on the observation of

CC growth and maintenance of cancer cells based on the observation of

CC concer including seminal vesicle cancer, lung, brain, breast, ovarian,

CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian,

CC testicular cancer and cancers of haematopoietic system. B7-L polypeptide

CC in allograft transplantation, graft versus host disease, T-cell

CC dependent B-cell mediated diseases and autoimmune diseases. B7-L

CC dependent B-cell mediated diseases and autoimmune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatlc; immunosuppressive; antiarthritlc; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotroplc; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and afterlosclerosis -
                                       autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
                                                                                                                 molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 13; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human B7-like protein, B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU75540 standard; Protein; 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; ABK13028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2001; 2001WO-US20719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EKEKTNKETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EKEKTNKETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chute HT;
```

and psoriasis, chronic inflammatory

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 373;
                              Homo sapiens
                                                            antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                             Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheantiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                               Human B7-like protein, B7-L_h2.
                                                                                                                                                                                                                                                    23-APR-2002
                                                                                                                                                                                                                                                                                      AAU75541;
                                                                                                                                                                                                                                                                                                                    AAU75541 standard; Protein; 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grave's disea
are also usef
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             shock syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pemphigoid),
(extrinsic al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antagonists o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nephropathies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                                                                                                                                           373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ymphoprolife
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     133 AENEPCEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 GSGSGNEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     73 TSQRYDQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                             NLASPEKV
                                                                                                                                                                                                                                                                                                                                                                                                           NLASPEKVSNTTVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TMLLTPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCVATWKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCVATWKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSGSGNEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGNENSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SGNENSGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TMLLTPTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AENEPCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   thies (e.g. glomerulonephritis), skin disorders (pemphigus and id), endocrinopathies (Grave's disease), various pneumopathies ic alreolitis), vasculopathies, coeliac disease, anaemia, ytopenias, Guillain-Barre syndrome and myasthenia gravis, and oliferative disorders such as multiple myeloma. The present represents the amino acid sequence of human B7-L_h1.
                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       SNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           allergy, asthma and hypersensitivity reactions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       #SDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NSDEOKTTETASLPPKSCESSDPEORNSSCGPPHORADORPPRPASHPOASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |CLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             powel disease (Crohn's disease and ulcerative colitis)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LTIRCCCCRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKINKETETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LTIRCCCCRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KARKSATVNLTVIRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NFTSEMITHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      including arteriosclerosis and vascular restenosis.
B7-L polypeptides are useful for alleviation of toxic or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 2014; DB 23; Pred. No. 3.3e-159;
                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                               antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynuclectide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders o conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                       treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of human B7-Lh2.
                                                                                                                                                                                                                    proliferation, including arteriosclerosis and vascular restenos Antagonists of B7-L polypeptides are useful for alleviation of shock syndrome or allosensitisation due to blood transfusions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a rol growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                    autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
                                                                                                                                                                                                                                                                                                                                                                               Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                    purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sarmiento
                                                                                                                                                                                                                                                                         including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are
```

ť

Sequence 38E

Query Match Best Local Matches 371; Similarity Conservative 96.3%; Score 2000; DB 23; Pred. No. 4.8e-158; Mismatches Indels Length 386; 0; Gaps

0;

Вb 망 Qy QΥ 73 13 73 13 GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72 TSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 132 GSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72 TSQRYDQGGNFTSEMITHNVEPSDSGNTRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 132

Qy 133 AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192

WO200200710-A2

```
RESULT 4
AAU75543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
           The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) a useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive, antiarthritic; antitutemat antiinflammatory; dermatological; antipscriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                               New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                 Claim 13;
                                                                                                                                                                                                                                                                                                         WPI; 2002-130881/17.
N-PSDB; ABK13031.
                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human B7-like protein, B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU75543 standard; Protein; 377 AA.
                                                                                                                                                                                                                                                                                                                                                             Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                           (AMGE-) AMGEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKTNKETETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKINKETETE 312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                             Fig 4; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                             Barmiento UM,
                                                                                                                                                                                                                                                                                                                                                             Schultz HJ,
transgenic
                                                                                                                                                                                                                                                                                                                                                             Chute
 mice
                                                                                                                                                                                                                                                                                                                                                             HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  252
                                                                                                                                             are
```

```
д
                                      20
                                                                                    В
                                                                                                                                Q
                                                                                                                                                                                В
                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of human B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dependent B-cell mediated diseases and autoimmune diseases.
310
                                                                                                                                                                                   193
                                                                                                                                                                                                                              193
                                                                                                                                                                                                                                                                            133
                                                                                                                                                                                                                                                                                                                        133
                                           313
                                                                                         253
                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                            TSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                 TMLLTPTCTLTIRCCCCRRRCCGCUCCCRCCFCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                         TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                          AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF 72
T---PATIQMNKRPQTPLLSLP 328
                                         SGNENSGYNSDEQKTTETASLP 334
                                                                                         TMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRRRG---NLKKRRQTKKLRQKVEMK
                                                                                                                                                                                   TCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAG
                                                                                                                                                                                                                                                                                                                      AENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTL 192
                                                                                                                                                                                                                                                                                                                                                                 TSQRYDQGGNLTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLVV 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         284;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 377 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 1514; DB 23; Pred. No. 1.3e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72
                                                                                                                                                                                     252
```

<u>ب</u>

```
RESULT 5
ABG28169
ABG28169 standard; Protein; 463 AA.

XX
AC
AC ABG28169;
XX
DT 18-FEB-2002 (first entry)
XX
DE Novel human diagnostic protein #28160.
XX
XX
XX
Human; chromosome mapping; gene therapy; forensic;
XX
XX
CS Homo sapiens.
```

WO200175067-A2

```
₽
                              Qy
                                                                        В
                                                                                                          Š
                                                                                                                                                  밁
                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or a quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful for treating inaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics. forensics, gene manning, identification of mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 20; SEQ ID No 58528; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-) HYSEQ INC
                                                                          181
                                                                                                                                                    121
                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                    109
241
                                                                                                              229
                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                               49
                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                      VPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPG
                                                                                                                                                                                                                                                                                                                           MWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSR 108
                                                                                          VLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRR
                                                                                                                                                                                                                                                                  LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYF
                                                                                                                                                                                                                                                                                                       MWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSR 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-639362/73
                                    KRG 291
                                                                                                                                                  VPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPG
                                                                                                                                                                                                                              LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYF
                                                                          VLSSLPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRR
                                                                                                                                                                                                                                                                                                                                                                                     243;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAS92356.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA
;
                                                                                                                                                                                                                                                                                                                                                                                                   63.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
                                                                                                                                                                                                                                                                                                                                                                             Score 1326; DB 22,
; Pred. No. 7.3e-102;
                                                                                                                                                                                                                                                                                                                                                                                                                     Length 463;
                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          techniques
                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                  180
                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
AAU75544
ID AAU7
antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mouse B7-like protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU75544 standard; Protein; 370 AA.
                                                                                                                                                                                                                                                                                                                                                                              03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                            WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouse; B7-like protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B7-L; antiinfertility; gynaecological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antirheumatic;
```

Welcher AA, (AMGE-) AMGEN INC Sarmiento UM, Schultz HJ, Chute HT;

2002-130881/17.

28-JUN-2000; 2000US-214512P 28-NOV-2000; 2000US-0729264

28-JUN-2001; 2001WO-US20719

New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis

Claim 13; Fig 5; 135pp; English.

proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (1) plays a role in growth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (1) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also The polypeptide, polynucleotide encoding it and antibody aga useful for treating B7-llke polypeptide-related disease, disconditions including reproductive disorders (e.g. infertilit miscarriage, preterm labour and delivery and endometriosis) proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for nephropathies (e.g. treatment of allergy, asthma and hypersensitivity reactions invention relates to an isolated B7-like (B7-L) polypeptide (I). polypeptide, polynucleotide encoding it and antibody against (I) for treating B7-like polypeptide-related disease, disorders o for diagnosis and treatment of diseases involving abnormal cell glomerulonephritis), skin disorders (pemphigus and infertility ç are

```
YARREST PRODUCTION OF THE PROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8×888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rat; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia graves, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_ml.
                                                                                   28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU75547 standard; Protein; 631
                     (AMGE-) AMGEN INC
                                                                                                                                                                          28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                           03-JAN-2002
                                                                                                                                                                                                                                                                                                WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                      endocrinopathy; lymphoproliferative disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                            reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiasthmatic; nephrotropic; antibacterial; virucide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rat B7-like protein, B7-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          343 KHQPGPATHPRVSFDIASPQKVRNVTLV 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 LLTVPEAVGSGSGNEVIEGPQNATVLKGSQARENCTVSQGWKLIMWALSDMVVLSVRPME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QRPPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEKTNK---ETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IILLAVAF$LLLILIIVLIIIFCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TPLGNGTL#CVAELKDLQASKSLTVNLTVVQPPPD-----SIGEEGPALPTWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLFSLPTWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG
                                                                                                                                                                                                                                                                                                                                                              rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54; Mismatches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          928.5; DB 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---CASRREKEESTYQNEIRKSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5,
```

```
δÃ
                                                   DЪ
                                                                                                    Qy
                                                                                                                                                           B
                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Concer including seminal vesicle cancer with treatment of cancer including seminal vesicle cancer. Unig. brain, breast, ovarian, cancer including seminal vesicle cancer. Unig. brain, breast, ovarian, cancer including seminal vesicle cancer. Unig. brain, breast, ovarian, cancer including seminal vesicle cancer. Unig. brain, breast, ovarian, cancer including cancer of haematopoietic system. B7-L polypeptide cancer. Unig. brain, breast, ovarian, cancer including the supplex of the symphocyte response considered in allograft transplantation, graft versus host disease. T-cell condended the cancer of the symptoms associated with cancer of the symptoms associated with cancer of the symptoms associated with caracteristic symptomic conditions. They care also useful associated (crown's disease involving about as they care also useful assimumosuppressive agents for bone marrow and organ crossis and treatment of diseases involving abnormal cell constitution or to prolong graft survival. B7-L molecules are also useful for alleviation or toxic shock syndrome or allosensitisation due to blood transfusions, and for creatment of allergy, asthma and hypersensitivity reactions, and for constraints of allergy, asthma and hypersensitivity reactions, and constraints of allergy, asthma and hypersensitivity asthmatics (certificative disorders such as multiple myeloma. The present constraints of the myeloma and myesthmatical gravis, and constraints of the myeloma. The present constraints and constraints of the myeloma and constraints of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         useful for enhancing the immune response to tumours. (I) plays a regrowth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transgenic mice overexpressing B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The polypeptide, polynucleotide encoding it and antibody agains useful for treating B7-like polypeptide-related disease, disord conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 8; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Welcher AA,
                                                      192
                                                                                                                                                           132
                                                                                                          89
                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                                     72
                                                                                                                                                                                                                                                                                                                         26
                                                                                                                                                                                                                                                                                                                                                                             12
                                                                                                                                                                                                                                                                     VGQVSKSVRNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQGPITNNRFEKAL 131
                                                                                                                                                                                                                                                                                                                                                                             LVILAQLTASGSSYQIIEGPQMAYSCQPLQESPLLGFPRLRFIHLFVLLLVGLLQISSGI 71
  -----TVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHS
                                                                                                          IHNVEPSDSGNIRCSLQNSRLHGSAYL----
                                                                                                                                                              LSCDYKFCSEEQSIHRIYWQKHDKMVLSVISGVPEVWPKYKNRTTYASYNSTDSFISELI 191
                                                                                                                                                                                                                                                                                                                                                                                                                           LLTVPEAVGSGSGNEVIEGPQ------
                                                         IHDVQPSDSGSVQCSLQNSHGFGSAFLSVQVYDIANNYSFSLLGLILSDRGTYTCVVQRY
                                                                                                                                                                                                                                                                                                                      -----NATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 587.5; DB Pred. No. 3e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112;
                                                                                                                                                                                                               ---TSQRYDQGGNFTSEMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels 315; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (I) plays a role
                                                                                                                                                                                                                  88
                                                      251
                                                                                                          115
                                                                                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         are
```

DЪ

EGGSYVVKHLTTVEVMGTLNIPSNNLIVTEGEPCNVTCYAVGWTSLPDISWELEVPVSHS

311

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
The polypeptide, polynucleotide encoding it and antibody against (I). useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometrical.
                                                                                                                           New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antihumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                 Claim 13; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus.
                                                                                                                                                                                                                                            Welcher
                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                               WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse B7-like protein, B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU75545 standard; Protein;
                                                                                                                                                                                                                                                                       (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                        28-NOV-2000;
                                                                                                                                                                                                                                                                                                                     28-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165
                                                                                                                                                                                                           2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENSGYNSDEOKTTETASLPPKSCESSDPEORNSSCGPPHORADO 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RVLSVLDLTPLGNGTLTCVAELKDLQASKSLTVNLGINTTISQDPESELYTISSQLDFNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENYGYSSDECITVKFRRCFRRRNEASRETNKNLYIGPVEAAAEQ 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IAIIIFCCCCASR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTLTIRCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AFSLLLIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTMLL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYDHFIDCFIEYGDAHVSQNFTVVQPPPD------SIGEEGPALPTWAIILLAV 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SAVSILALTPQSNGTLTCVATWKSLKARKSATVNL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LSVRADEP POPULTEYGNPSADIKRITCFASGGFPKPRLSWLENGRELNSYNSFLEPGNFM 371
                                                                                                                                                                                                                                          Sarmiento
                                                                                                                                                                                                                                                                                                    2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                                   2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRRRCCGCNCCCRCCFCCRRKRGFRIQFQ-KKSEKEKTNK---ETETESGN 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IVLIIIFTWVKPPEDPPDEKQTVPFAWAGPDAVKAIIIFFIAITVIAVIAA 539
                                                                                                                                                                                                                                          UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -TVIRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----REKEESTYQNEIRKSANMRTNKADPETKLKSGK 585
                                                                                                                                                                                                                                          Schultz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                         , LH
                                                                                                                                                                                                                                         Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----SYYFVPEPSDLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----TPT
                                                                                                                                                             useful
```

AAU75546
ID AAU7
XX
AC AAU7
XX

AAU75546 standard;

Protein;

AAU75546

```
В
                                                                                                                                           Q
                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coelase), various pneumopathies thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the amino acid sequence of mouse B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful for enhancing the immune response to tumours (I) plays a growth and maintenance of cancer cells based on the observation seminal vesicle hyperplasia in transgenic mice overexpressing B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               purpura and psoriasis, chronic inflammatory disease such as
inflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              arthritis, multiple sclerosis, diabetes, immune thrombocytopenic
243
                                                 359
                                                                                               185
                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                 1,26
                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                                                                                                                  125
                                                                                                                                                                                                                                                245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIITNDRETSORYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELF 124
KHQPGPATHPRVSFDIASPQKVRNVTLV 270
                                              QRPPRPASHPQASFNLASPEKVSNTTVV 386
                                                                                               NMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELN
                                                                                                                         KEKTNK---ETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRAD 358
                                                                                                                                                                                                  IILLAVAFSLLLILIIVLIIIFCCC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                             IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LLTVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 64
                                                                                                                                                                                                                                              KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQ---KKSE
                                                                                                                                                                                                                                                                                                                                                TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIITNNRFTYASYNSTDSFISELIIHDVQPSDSGSVQCSLQNSHGFGSAFLSVQ----- 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   270 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27.9%; Score 579.5; DB 2 34.3%; Pred. No. 4.7e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 23;
                                                                                                                                                                                                  -CASRREKEESTYQNEIRKSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels 135;
                                                                                                                                                                                                                                                                                               -DSIGEEGPALPTWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                    (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                               242
                                                                                                                                                                                               184
                                                                                                                                                                                                                                                                                               139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ģ
```

23-APR-2002

(first entry)

```
dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders of conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising
                                                                                                                                                                                                                                                        useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a rogrowth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouse: B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
(extrinsic alveolitis), vasculopathies, coellac ulsease, university calveolitis), vasculopathies, coellac ulsease, university coellac alveolitis, Guillain-Barre syndrome and myasthenia grathrombocytopenias, Coellac ulsease, university coel
                                                                                                                                                                                                                                                                                                                                                                                                   are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 13; Fig 7; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                endocrinopathy; lymphoproliferative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  reproductive disorder; graft versus host disease; autoimmutoxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                      treatment of allergy, asthma and hypersensitivity reactions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse
                                                                                                                                                                                    nephropathies (e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sarmiento UM,
                                                                                                             s (e.g. glomerulonephritis), skin disorders (pemphigus and endocrinopathies (Grave's disease), various pneumopathies lveolitis), vasculopathies, coeliac disease, anaemia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nephrotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B7-L_m3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibacterial; virucide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumour;
                                                                               gravis, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antirheumatic;
                                             present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   are
```

```
RESULT 10
AAB81925
XX
                                                                                                                                                                                                                                                                                                                                                            XXXXI
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                    Material for extracorporeal circulation, applicable in selective elimination of diabetic complication factors such as carbonyl stress products caused by abnormally promoted carbonyl stress from excretor
                                                                                                                           Shimizu
                                                                                                                                                                                                                                                                                                                                                                         AAB81925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                        08-SEP-1999;
                                                                                                                                                                                                                                                                    Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                              AAB81925 standard; protein; 404
                                                                                                    WPI; 2001-290314/30.
                                                                                                                                                 (TORA ) TORAY IND INC
                                                                                                                                                                                              08-SEP-2000; 2000WO-JP06172
                                                                                                                                                                                                                                             WO200118060-A1
                                                                                                                                                                                                                                                                                        diabetes; vascular
                                                                                                                                                                                                                                                                                                    Extracorporeal circulation;
                                                                                                                                                                                                                                                                                                                                                   15-JUN-2001
                                                                                                                                                                                                                     15-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                         199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PGPATHPRVSFDIASPQKVRNVTLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRPASHPQASFNLASPEKVSNTTVV 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQVMGELF 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LVILAQLTASGSSYQIIEGPQNVTVLKDSEAHFNCTVTHGWKLLMWTLNQMVVLSLTTQG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LLTVPEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPME 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     THKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSSSL--PYQELNKHQ 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TNK---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEK 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILAL 184
                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETETESGNENSGYNSDEQKTTETASLPPKSCESSDPEQRNSSCGPPHQRADQRP 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  223 AA;
                                          in vascular
                                                                                                                           Kubota M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                          99JP-0254463
                                                                                                                                                                                                                                                                                                                            circulation
                                                                                                                                                                                                                                                                                          lesion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24.0%;
31.2%;
                                                                                                                           Akiyama
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -RKSANM--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41;
                                                                                                                                                                                                                                                                                        ; carbonyl stress product; receptor;
excretory dysfunction.
                                                                                                                                                                                                                                                                                                                            material receptor protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 498; DB 23;
Pred. No. 2.2e-33;
                                                                                                                             Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 223;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ---QNEI----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      176;
                                                       excretory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
```

Claim 1; Page 31-32;

36pp; Japanese.

describes a material for

extracorporeal circulation

```
RESULT 11
AAE23219
ID AAE23
XX AAE23
XX AAE23
XX Human
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          덩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
WPI; 2002-426260/45
                                                             Stern DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; Receptor for advanced glycosylation end product; RAGE; cardiant; tissue growth; neointimal formation; blood vessel; restcnosis; diabetes; myocardial infarction; angioplasty; peripheral vascular surgery; angina; transgenic animal; acute thrombotic stroke; venous thrombosis.
                                                                                                                           (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                                                                                         13-OCT-2000; 2000US-0687528
                                                                                                                                                                                                                                                   12-OCT-2001; 2001WO-US32036
                                                                                                                                                                                                                                                                                                                               18-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                             WO200230889-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human receptor for advanced glycosylation end product (RAGE) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE23219 standard; Protein; 404 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fluid, and are therefore useful in treating vascular lesions like arteriosclerosis due to carbonyl stress products caused by abnormally promoted carbonyl stress from excretory dysfunction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        which is made from a water insoluble carrier immobilized with a protein having the sequence shown here. The materials of the invention, including adsorbents, are for extracorporeal circulation, which are applicable in the selective elimination of diabetic complication factors from a body
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115 LTVQVMGELFIP----SVNLVVAENEP-------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      164 LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 IIINDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TETASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RTAPIQPRVWEPVPLEEVQLVV----EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PEIVDSAS--ELTAGVPN-----KVGTCVSEGSYPAGTLSWHLDG------KP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PGEEG ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΚĐ--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                          Schmidt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE- 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23.3%;
                                                          Marso S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILW 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 151; Db 22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---QRRGEERKAPENQEEEEERAELN-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                      Topol E,
                                                      Lincoff AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rom a body
like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
```

```
RESULT 12
AAU77543
밁
                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SXXCCCCCCCCCCCCCCXXXTTTTXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                  Human receptor for advanced glycosylation end product (RAGE).
                                                                                                   05-JUN-2002
                                                                                                                                             AAU77543;
                                                                                                                                                                                   AAU77543 standard; Protein; 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  like non-human animal, a transgenic non-human animal or a human suffering from diabetes, acute thrombotic stroke, venous thrombosis, unstable angina, myccardial infarction, abrupt closure following angioplasty or stent placement, or thrombosis as a result of peripheral vascular surgery The method is also useful for preventing restenosis and for determining whether a compound inhibits new tissue growth in a blood vessel in a subject. The present sequence is human receptor for advanced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a method for inhibiting new tissue growth or neointimal formation in blood vessels in a subject that has experienced blood vessel injury and preventing exaggerated restenosis in a diabetic subject. The method comprises administering an inhibitor of receptor for advanced glycation/glycosylation end product (RAGE), so as to inhibit new tissue growth or neointimal formation in subject's blood vessels and preventing restenosis in the subject. The method is useful for inhibiting new tissue growth or neointimal formation in blood vessels in a subject like non-human arisinal a transcription.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inhibiting new tissue growth or neointimal formation in blood vessels of subject suffering from diabetes, stroke and preventing restenosis, comprises administering inhibitor of receptor for advance glycation end
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 16; 43pp; English.
                                                                                                                                                                                                                                                                                                390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   glycosylation end product (RAGE) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAD36952.
                                                                                                                                                                                                                                                                                                                                                                                                                            270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 323 PGEEG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157 LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG------KP 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                     TETASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                     RRRCCGCNCCCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LTVQVMGELFIP----SVNLVVAENEP------CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KD-----GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 AA;
                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                             -QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.3%;
                                                                                                                                                                                                                                                                                                                                                                             -----QRRGEERKAPENQEEEEERAELN------
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 151; DB 23; Pred. No. 0.00035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322
```

Receptor for advanced glycation end product; RAGE; receptor; amyloid beta peptide; blood-brain barrier; neurovascular str

```
Š
                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                    Ş
               Qy
                                                      밁
                                                                                     Q
                                                                                                                              밁
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     an inhibitor (I) of receptor for advanced glycation end product (RAGE) (I) inhibits transcytosis of amyloid beta peptides across blood-brain barrier, thus decreasing cerebral vasoconstriction and increasing cerebral blood flow: (I) is useful for treating amyloid angiopathy in a subject, decreasing cerebral vasoconstriction in a transgenic non-human animal (preferably, transgenic mouse overexpressing mutant human amyloid beta precursor protein) or a human, suffering from chronic or acute cerebral amyloid angiopathy, preferably, Alzheimer's disease, and for ameliorating heurovascular stress comprising cerebral amyloid angiopathy in a subject, where the neurovascular stress is caused by Alzheimer's disease, aging, Dom's syndrome, head trauma or stroke. This is the amino acid sequence of human receptor for advanced glycation end product (RAGE) described in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ameliorating neurovascular stress and decreasing cerebral vasoconstriction in subject suffering from chronic/acute cerebral amyloid angiopathy, by administering inhibitor of receptor for advanced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cerebral amyloid angiopathy; transgenic animal; amyloid beta prec Alzheimer's disease; Down's syndrome; head trauma; stroke; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 16; 68pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYCO ) UNIV COLUMBIA NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-AUG-2000; 2000US-0638648.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200214519-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cerebral vasoconstriction suppressor; cerebral blood flow enhancer;
cerebral amyloid angiopathy; transgenic animal; amyloid beta precursor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chronic or acute cerebral amyloid angiopathy, comprising administering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                         124
                   270
                                                                                                                                                                                                                                            115 LTVQVMGELFIP----SVNLVVAENEP----
                                                                                                                                                                                                                                                                                 164 LVPNEKGVSVKEQTRRHPETGLFTLQSELM -- - VTPARGGDPRPTFSCSFSPGLPRHRAL
                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      invention describes a method of ameliorating neurovascular stress, decreasing cerebral vasoconstriction in subject suffering from
                                                                                                                                                                                                                                                                                                                                                         PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-257610/30
                                                                                                                                                                                                                                                                                                                  IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DM,
                   RRRCCGCN
                                                        PGEEG---
                                                                                           PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC
                                                                                                                                                                   LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC
                                                                                                                                                                                                          RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                               90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABK10856
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              endproduct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schmidt AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001WO-US25416
CCRCCFCCRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT 327
                                                                                                                                -GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yan SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                 38;
                                                          --PTAGSVGGSGLGTLALALGILGGLGTAALLIGVILW
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 151; DB 23; Pred. No. 0.00035;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zlokovic
                                                                                                                                                                                                                                                -CEVTCLPSHWTRLPDISWE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     146;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                            363
                                                                                                                                                                                                              272
                                                                                                                                                                         216
                                                                                                                                                                                                                                                                                                                                                                                                                                     19;
```

```
RESULT 13
AAM48745
                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
            Qy
                                           Дġ
                                                                          δÃ
                                                                                                       Ъ
                                                                                                                                    ОĀ
                                                                                                                                                                        Matches
                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                         The invention relates to detecting receptor for advanced glycated endproducts (RAGE) modulators comprises determining the amount of RAGE protein or its fragment bound to the pre-adsorbed ligand by measuring the amount of anti-RAGE antibody bound to the solid surface. The method is useful for rapid, high-throughput identification of compounds that modulate RAGE. The compounds are useful for treating symptoms of diabetic late complications, amyloidoses, Alzheimer's disease, cancer, inflammation, kidney failure, systemic lupus nephritis or inflammatory lupus nephritis, erectile dysfunction and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antidiabetic; neuroprotective; cytostatic; antiinflammatory; vasotropic; nephrotropic; dermatological; antiarteriosclerotic; nootropic; diabetes; alzheimer's disease; cancer; inflammation; kidney failure; systemic lupus; nephritis; erectile dysfunction; atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Detecting a receptor for advanced glycated endproducts (RAGE) modulators, for treating e.g., cancer, diabetes or inflammation, comprises measuring the amount of bound anti-RAGE antibody -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human RAGE protein SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Fig 2; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-114372/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAY-2000;
05-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2001; 2001WO-US17447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200192892-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM48745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAM48745 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TRAN-) TRANS
                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                               atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 364
                115
                                              164
                                                                                                          124
                                                                           66
                                                                                                                                         ဖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QRR---
LTVQVMGELFIP----SVNLVVAENEP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TETASLPPKSCESSDPEQRNSSCGPP
                                                                                                          PEIVDSAS--ELTAGVPN------KVGTCVSEGSYPAGTLSWHLDG------KP 163
                                             LVPNEKGVSVKEQTRRHPETGLFTLQSELM---VTPARGGDPRPTFSCSFSPGLPRHRAL
                                                                                                                                      PEAVGSGSGNEVIEGPQNATVLKGSQARFNCTVSQG---WKLIMWALSDMVVLSVRPMEP 65
                                                                          IITNDRFTS-----QRYDQGGNFT--SEMIIHNVEPSDSGNIR----CSLQNSRLHGSAY 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAGE; receptor for advanced glycated endproduct; receptor;
                                                                                                                                                                        90;
                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                   404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-207342P
2001US-0799152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TECH PHARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QSEEPEAGESSTGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                        23.3%;
                                                                                                                                                                        38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                     Score 151; DB 23;
Pred. No. 0.00035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QRRGEERKAPENQEEEEERAELN---
                                                                                                                                                                        Mismatches
                 CEVICLPSHWIRLPDISWE 156
                                                                                                                                                                                                      Length 404;
                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       389
                                                   220
                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                           19;
```

```
AAW81030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                         This polypeptide comprises a portion of a new human melanoma associated antigen, designated MG50. The amino acid sequence was deduced from a cDNA clone (see AAV99922) isolated from melanoma cell line MSM M-1 cDNA by subtractive hybridisation. The 5' region of MG50 cDNA was not obtained MG50 mRNA has been detected in melanoma, lung carcinoma and rhabdomyosarcoma cells, foetal brain, foetal heart and human placenta. The invention also provides T cell epitopes (see AAW81031-54) from MG50, including cytotoxic and helper T cell epitopes, antibodies that specifically bind to MG50 or an MG50 T cell epitope, recombinant vectors, and antigen presenting cells. Methods are provided for identifying an MG50 melanoma associated antigen in an individual and for identifying an
                                                                                                                                                                                                                                                                Claim 1; Page 45-49; 79pp; English.
               immune response against an MG50 melanoma associated antigen, as well as methods of stimulating T lymphocytes that are reactive
                                                                                                                                                                                                                                                                                                   rhabdomyosarcoma
                                                                                                                                                                                                                                                                                                                    MG50-expressing cancers,
                                                                                                                                                                                                                                                                                                                           New MG50 melanoma associated antigen fragments - used to develop products for the detection, treatment and prevention of
                                                                                                                                                                                                                                                                                                                                                                                                                                  Deans RJ, Kap-Mitchell J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9855133-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW81030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (REGC ) UNIV CALIFORNIA.
(UYSC-) UNIV GOUTHERN CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                therapy; vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MG50; melanoma gene-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Melanoma associated antigen MG50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW81030 standard; Protein; 1496 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           270 RRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT--NKETETESGNENSGYNSDEQKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell epitope;
                                                                                                                                                                                                                                                                                                                                                                                    1999-080820/07.
DB; AAV99922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LGLLVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRC 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----QSEEPEAGESSTGGP 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TETASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVSISIIE- 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIHWM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QRR-----QRRGEERKAPENQEEEEERAELN----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRCCCC
        cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOUTHERN CALIFORNIA.
      cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0870941.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US11533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ------PTAGSYGGSGLGTLALALGILGGLGTAALLIGVILW 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer;
     expressing MG50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            melanoma associated antigen; human;
lung cancer; rhabdomyosarcoma; diag
                                                                                                                                                                                                                                                                                                             e.g. melanoma, lung cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                  Minev BR,
and for treating an individual
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mitchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              389
```

```
PD XX PF XX 
                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSSSXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY70469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   chromosome 2p24.3; cytostatic; gene therapy; tumour cell; inducer; diagnosis; therapeutic; proliferative disease; cell cycle arrest; cancer; treatment; apoptosis; knockout animal; cancer susceptibility; dPxn; hPxn; peroxidasin; redox-regulation; reactive oxygen species; ROS.
                                                 N-PSDB; AAZ51671
                                                                                                                                        Horikoshi N,
                                                                                                                                                                                                (UYPR-) UNIV PRINCETON
                                                                                                                                                                                                                                                           28-AUG-1998;
                                                                                                                                                                                                                                                                                                                   27-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                           09-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200012526-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY70469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY70469 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRG2; p53 target; human; modulate; cell proliferation; immunomodulatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human p53 target molecule, PRG2 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        having cancer cells that express MG50. The products and methods can be used for the detection, treatment and prevention of MG50-expressing cancers, e.g. melanomas, lung cancer or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rhabdomyosarcoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354 GSPARPTFVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRTPLPVDPRVNITPS-- 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13 GSGSGNEVIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDR 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      госат
                                                                                2000-246724/21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GEPEPAITWNKDGVQVTESGKFHISPEGFLTINDVGPADAGRYECVARNTIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQS 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAYLTVQVMGELFIPSVN 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----RCCCCRRRCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NGTLTCVATWKSLKARKSATVNLTV-----IRCPQDT----GGGINIPGVLSSLPSL 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVVIEGQTVDFQC-EAKGNPPPVIAWTKGGSQLSVDRRHLVLSSGTLR--ISGVALHDQ-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTTVEVGANVQLP-----CSSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAFIIVQALPQFTVTPQD 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1496 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                        Shenk
                                                                                                                                                                                                                                                           98US-0098251
                                                                                                                                                                                                                                                                                                                   99WO-US19551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= Mature_human_PRG2_protein
/note= "Homologue of Drosophila p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30..1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.5%;
25.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 135; DB 2
Pred. No. 0.041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila peroxidasin, dPxn"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15;
```

New p53-inducible isolated nucleic acid molecule including open

reading

```
δõ
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC upregulated in response to induction of p53 activity in human colon CC cancer EB1 cells. This sequence is the human homologue (hPxn) of CC Drosophila peroxidasin gene dPxn, that is expressed in heart, placenta, CC spleen, ovary and intestines. PRG2 is involved in p53-mediated growth CC suppression pathways and plays a role in redox regulation. It is a CC to specify the peroxidase that increases the intracellular content of reactive CC oxygen species (ROS). They are potential targets of p53 regulatory CC activity and are useful for modulation of cellular proliferation. PRG2 CC gene is localised to human chromosome 2p24.3. The PRG target molecules CC proteins and antibodies are useful as diagnostic and therapeutic agents CC for detection and treatment of cancer and other proliferative diseases. CC the gene/cDNA may be used for gene therapy, to restore a gene function CC downstream of p53, that cannot be activated in the p53-deficient tumour CC cell. Antibodies can be used as inducers of cell cycle arrest and/or CC as a model of cancer susceptibility.
                                                                                               밁
                                                                                                                                        8
Search completed: April 28, Job time: 41.4662 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 6.5%; Score 135; DB 21; Best Local Similarity 25.0%; Pred. No. 0.041; Matches 73; Conservative 36; Mismatches 127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  frame encoding human homolog of Drosophila melanogaster peroxidasin, useful e.g. in detection and treatment of cancer - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 71-74; 83pp; English
                                                                                                                                                                                                                                                                                                                                         130 LVVAENEPCEVTCLPSHWTRLPDISW-ELGLLVSHSSYYFVPEPSDLQSAVSILALTPQS 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         354 GSPARPTFVIQPQNTEVLVGESVTLECSATGHPPPRISWTRGDRTPLPVDPRVNITPS-- 411
                                                                                            567 GEPEPAITWIKDGVQVTESGKFHISPEGFLTINDVGPADAGRYECVARNTIG 618
                                                                                                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13 GSGSGNEVIEGPQNATVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDR 71
                                                                                                                                                                                                                                                                                                                                                                                                                                   FTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS--RLHGSAYLTVQVMGELFIPSVN 129
                                                                                                                                        GFSLP--TWGKVGLGL--AGTMLLTPTCTLTI-----RCCCCRRRCCG
                                                                                                                                                                                                                                                                                        RVVIEGQTVDFQC-EAKGNPPPVIAWTKGGSQLSVDRRHLVLSSGTLR---ISGVALHDQ-
                                                                                                                                                                                                                                                                                                                                                                                          -----GG-----LYIQNVVQGDSGEYACSATNNIDSVHATAFIIVQALPQFTVTPQD 458
                                                                                                                                                                                                                                          NGTLTCVATWKSLKARKSATVNLTV-----IRCPQDT----GGGINIPGVLSSLPSL 236
                                                                                                                                                                                            -GQYECQAV--NIIGSQKVVAHLTVQPRVTPVFASIPSDTTVEVGANVQLP-----CSSQ 566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1496 AA;
                       2003, 18:14:34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
```

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                            Database :
                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
 EST:*

: en_
2: en_
3: en_
4: en_
5: en_
6: en_
6: em
7: em
9: 9b
10: c
112: c
113: c
114: c
115: c
116: c
117: c
118: c
118: c
119: c
20: c
21: c
21: c
22: c
23: c
24: c
25: c
26: c
27: c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 28, 2003, 23:25:02; Search time 1905.64 Seconds (without alignments) 9985.963 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16154066 seqs, 8097743376 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-729-264-1
1175
1 ctgtctgcccatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ctgtctgcccatctgaataa.....gtaatacaactgtagtatag 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                       em_estba:*
em_esthum:*
em_estin:*
em_estmu:*
                                                 gb_est2:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est5:*
em_estfun:*
em_estfun:*
em_gss_hum:*
em_gss_hum:*
em_gss_pln:*
em_gss_pun:*
em_gss_pun:*
em_gss_mam:*
                                                                                                                                                                                                                                         gb_est1:*
                                                                                                                                                                                                                                                      em_htc:*
                                                                                                                                                                                                                                                                               em_estpl:*
                                                                                                                                                                                                                                                                                            em_estov:*
                                                                                                                                                                                                                                                                  em_estro:*
em_gss_pro:*
em_gss_rod:*
                          em_gss_mus:*
em_gss_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32308132
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

σ	ı Uı	4	ω	2		No.	Result	
199	247.8	259.4	267.4	279	308.6	Score		
16.9	21.1	22.1	22.8	23.7	26.3	Match I	Query	•
517	527	631	725	794	784	ength		
10	10	10	12	12	12	: B		
BE476432	BE032610	BB663870	BG740428	BF784177	BG863468	Match Length DB ID		
BE476432 159670 BA	BE032610 132035 MA	BB663870 BB663870	BG740428 602633817	BF784177 602108039	BG863468 602796941	Description		

	000	ი ი		O	იი	0	O			(כ	c	O				O									
4 4 4 5 4 3	41	ω ω 0 0 0	36	ωω 4π	ω u 	, μ	30	2 2 9 8	27	26	2 2 5 4	23	22	20	19	18	17	7 L	14	13	12	11	10	9	œ	7
49.6 49.6 49.4	9 5	52.6 50.8	uω	7.	78.6	78.6	98.4	100	102.8	110	127.4		143.8	л:	.ω	ω	ω:	۰.	18	186	186	186	186	0.	90.	91.
4 4 4 2 2 2	4.3	4 4 4 0 0 0	4.8	5.6 86	6.7	6.7	8.4	ο œ л ∪л	8.7	9.4	10.8	11.0	12.2				14.3			•	+	15.8				,
925 942 481	447	422 457 458	282 818	644 397	406	360	525	185	889	785	6 ω 8 9 4 7 4	471	291	530	556	216	600	5 G 5 G 5 G	486	1552	931	611	471	677	622	524
17 17 10	10	ى ى ى	10 12	10 10	φψ	ø	17	14	13	ω, Έ	10	12	17	و <u>د</u>	9	12	17	10	9	1	12	10	9	17	17	10
CNS0381E CNS00601 BE017134	AV431233 AA695064	AI756062 AJ003343 AL514929	BB564363 BG445021	BB531388 AW112084	A1548720 A1788973	A1647601	AQ403719	N47851	BI454276	BI452873	BB846133	BF040046	AZ411779	AI790785	AI788300	BG206666	AZ379623	BE376590	AI425363	AK008060	BG173684	AW990468	AA265274 ,	G10787	AG069679	9
AL3320:3 Tetracdon AL065607 Drosophil BE017134 fk76f06.y		AI756062 EtESTea09 AJ003343 AJ003343 AL514929 AL514929	BB56	BB531388 BB531388 AW112084 MC7851 mo	A1548/20 uK28a12.x A1788973 uk56d01.x	A1647601 uk41f12.x	AQ403719 HS_5049_A	N47851 yw95h05.rl	BI454276 603171509	BI452873 603170211	BB846133 BB846133	BF040046 BP250004B	AZ411779 1M0185B04	AI790785 uk28a12.y	A1788300 uk56d01.y	BG206666 RST26117	AZ379623 1M0134G22	BE376590 601226419	1x91d09.y	Mus musc	60233682	uf37	1x91d09.ř	107877 Pan trog	79 Pan	AV601192 AV601192

ALIGNMENTS

FEATURES	TITLE JOURNAL COMMENT	ORGANISM REFERENCE AUTHORS	ACCESSION VERSION KEYWORDS SOURCE	RESULT 1 BG863468 LOCUS DEFINITION
DNA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAMIO830 row: b column: 12 High quality sequence stop: 768. Location/Qualifiers	National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.	Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus. Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 784) NIH-MGC http://mgc.nci.nih.gov/.	mRNA sequence. BG863468 BG863468.1 GI:14214006 EST. house mouse.	BG863468 784 bp mRNA linear EST 29-MAY-2001 602796941F1 NCI_CGAP_Mam4 Mus musculus cDNA clone IMAGE:4917803 5',

```
RESULT 2
BF784177
                                                FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                    504
                                                                                                                                                                                                                                                                                                                                    543
                                                                                                                                                                                                                                                                                                                                                                 444
                                                                                                                                                                                                                                                                                                                                                                                                                                   384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 182
                                                                                                                                    722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84
                                                                                                                                                                                                                                                                                                                                                                                                                     TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGTAAGTTACTTGTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCAGAACAGTCGCCTGCATGGATCTGCTTACCCTTACCGTCCAAGTTATGGGAGAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAATGTAACAGTCCTAAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC
                                                                                                                                  CTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCC
                                                                                                                                                                                                                                                                                                    TCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCT
                                                                                                                                                                                                                                                                                                                                  CCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                  AACATTCCTAGCAACCATCATAGTCACTGAGGGTGAACCCTGTAATGTGACTTGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAGTCATGGGGACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 302
                                                                                                                                                                                                   CTCACAACA-TGGGCAACGGGACCTTGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCC
                                                                                                                                                                                                                                                                   TCGAGTTACAATTCCTTTCTGGAGCCGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGAC
794 bp 88784177 794 bp 602108039F1 NCI_CGAP_Kidl4 Mus 5', mRNA sequence.
BF784177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/strain="NMRI"
/db_xref="taxon:10090"
/clone="IMAGE:4917803"
/clone_ib="NCI_CGAP_Mam4"
/tissue_type="tumor, gross tissue"
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Organ: mammary; Vector: pCMV-SPORT6; Site_1; Sali; Site_2: Noti; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Priscilla Furth, NIH Reference for transgenic model: Li et al., Cell Growth and Differentiation 7, 3-11 (1996)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 308.6; DB 12; Pred. No. 2.3e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches 194; Indels
                                  musculus
                                  linear EST 12-JAN-20
cDNA clone IMAGE:4236489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2
                                                                                                                                                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                    602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
                                                                                                   Вр
                                                                                                                                Qγ
                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                    Дb
                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                   Дb
                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
   δã
                                    В
                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                     483
                                                                                                                                                                      423
                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                     144
                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                     324
                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84
```

Qy

뫄 Š

밁 δõ δÃ В δÃ 밁

В

Qy

뭐

Q Вb QY 밁 8 밁 δÃ Вb

В

```
GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                  GCCGTGGGCTGGACCTCACTCCCGGATATTTCCTGGGAGCTTGAGGTTCCCCGTAAGCCAT 602
                                                                                                                                                                                                                                                                                                  AACATTCCTAGCAACAACCTTATAGTCACTGAGGGTGAACCCTGTAATGTGACTTGCTAT 542
                                                                                                                                                                                                                                                                                                                                                 TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAGTCATGGGGACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 302
TCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCT
                                                                                                                                                      CCCTCACACTGGACCCGGGTCCCGGATATTTCCTGGGAGCTCCGGTCTCCTGGTCAGCCAT 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BF784177.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM9844 row: n column: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: ggapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
1 (bases 1 to 794)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 68.3
16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               quality sequence stop: 694.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10000"
/db_xref="taxon:10000"
/clone="IMACE:4236489"
/clone="ib="NCI_CGAP_Kid14"
/lab_host="NHIOB (TI phage-resistant)"
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1
/note="Org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 279; DB 12;
Pred. No. 1.8e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Site_1: NotI;
imer: Oligo dT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
```

```
Š
                                                                                                            밁
                                                                                                                                            γo
                                  밁
                                                                                                                                                                                     B
                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
BG740428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                          557 GATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCT
                                                                                                                                                                                                                           966
                                                                                                                                                                                                                                                                   377
                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                             906 AAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAAC 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564 CTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCC 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        624 CGCAAGTCT 632
                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                            GATCAACGTCCACCCAGGCCAGCCAAGTCATCCACAGGCCTTCTTTAATCTGGCCAGTCCT 1145
                                                                                                  TGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCT
                                                                                                                                                                                                   TCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCTCCCCCCCAAATCC 1025
                                                                                                                      TGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCT 1085
                                                                                                                                                                               TCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCCCCTCCCAAATCC
                                                                                                                                                                                                                                                       AGGAAATCTGAAAAAGAGAAGAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAAC 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCAGTCT 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCA-CACACTGGGCAACGGGACCTTGACTTGTGTGGCAAGAGCTGAAGGACTTGCAGGC 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCGAGTTACAATTCCTTTCTGGAGCC--GGGCACTTTATGAGGGTCTGAGTGTCCTGGAA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM10635 row: b column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Cleaver, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602633817F1 NCI_CGAP_Skn3 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BG740428.1 GI:14051081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 725)
                                                                                                                                                                                                                                                                                                                                                                                                                                        227
                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      /Clone_lib="NCI_CGAP_Skn3"
/Lab_host="DH10B (T1 phage-resistant)"
/note="Organ: skin; vector: pcMv-SpORP6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.5kb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
a 163 c 159 g 176 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4778789"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                        22.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         row: b column: 06
                                                                                                                                                                                                                                                                                                                                                        Score 267.4; DB 1
Pred. No. 8.9e-52;
                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p mRNA linear EST 15-MAY-2001 sapiens cDNA clone IMAGE:4778789 5',
                                                                                                                                                                                                                                                                                                                                                                          DB 12;
                                                                                                                                                                                                                                                                                                                                      1
                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                          Length 725;
                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                               496
                            616
                                                                                                    556
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB663870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayashizaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                              Y. and Hayashizaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB663870.1 GI:16497624
                                                                                                                                                                                                                                     e mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 631)
/note="Site_1: Sall; Site_2: BamHI; cDNA library was
prepared and sequenced in Mouse Genome Encyclopedia
                                    /tissue_type="lung"
/dev_stage="0 day neonate"
/lab_host="DH10B"
                                                                                                                                                                                                                                     Lissues
                                                                                                                                    /clone="E030016M12"
                                                                                                  lung"
                                                                                                                                                         /db_xref="taxon:10090"
                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                               Location/Qualifiers
```

```
Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P, Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh
,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura
,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo, S., Shinagawa, A., Saito, T., Kiyosawa, H., Yamanaka, I., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T., Hara,A.
Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J., Konno,H., Kouda
,M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K., Ohno,M.,
Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., Sasaki
,D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suuki,H.,
Tagami,M., Tagawa,A., Takahashi,F., Takeda,Y., Tanaka,T., Toya,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       muramatsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTs (Arakawa,T., et al. 2001)
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BB663870 RIKEN full-length enriched, 0 day neonate lung Mus musculus cDNA clone E030016M12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                   Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                           Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Computer-based methods for the mouse full-length cDNA
/clone_lib="RIKEN full-length enriched, 0 day neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
```

```
RESULT 5
BE032610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                         REFERENCE
                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 347;
                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                        616
                                                                                                                                                                                                                                                                                                                                                                                                                                                    504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCGTGGGCTGGACCTCCCCGGATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCAT 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACATTCCTAGCAACAACCTTATAGTCACTGAGGGTGAACCCTGTAATGTGACTTGCTAT 555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAAGCTATTATT 516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCAT 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTA 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAGTCATGGGGACCCTG 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                        TCGAGTTACAATT 628
                                                                                                                                                                                                                             BE032610.1 GI:8327619
                                                                                                                                                                                                                                               132035 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence \ensuremath{\mathtt{BE}032610}
                                                                                                                                                                                                                                                                                             BE032610
Design and use of two pooled tissue normalized
                           and Keele, J.W.
                                             Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A.,
                                                                  1 (bases 1 to 527)
Fahrenkrug, S.C., Freking, B.A., Rohrer, G.A., Smith, T.P.L., Casas, E.,
                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                           Sus scrota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. Second strand cDNA was prepared with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22.1%;
70.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 259.4; DB 10; Length 631; Pred. No. 6.4e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                               527 bp
                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                  Laegreid, W.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

Ş

Дb

Š В Qy В

밁

Ş В Š D Qy

QΥ В

밁

SOURCE

TITLE

VERSION

LOCUS

δõ

δõ

ORIGIN

```
RESULT 6
BE476432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                          γ
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                  ΩУ
                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                       SOURCE
                                                                                                                               DEFINITION
                                                                          KEYWORDS
                                                                                         VERSION
                                                                                                              ACCESSION
                                                                                                                                                    Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 GCGCTGGTCGTTCTGGCTGGGCTGGCAGCTTGTGGATCCGGCAATGAAATCTTAGAGGGT 192
                                                                                                                                                                                                                                             493
                                                                                                                                                                                                                                                                                                                                                                                                           264 ACCTCGGAGATGATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCAGGAACGTCACGGCGGTGAAGGGCTCGGAGGCTCCACTTCAACTGCACCATCTCCCAG
                                                                                                                                                                                                                                           CTCATTCCCGGAGGCAGCCTCGTAGTCCTTGCGGA 527
                                                                                                                                                                                                                                                                               TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAA 418
                                                                                                                                                                                                                                                                                                                     GAGCCCATCATCACCAACGACCGATTCACGTCTGCAAGTTATGAAGAGGGCGGTAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTGGAAGCTCATCATGTGGGCTCTGAAAGGCACGGTGGTTCTGAGCGTCACGCCCACC
                                                                                                                                                                                                                                                                                                                                                                                          ATCTCTGAGATGATCATCCATGACGTGCAGCTCAGTGATGCCGGGCAGGTCAAA IGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2000)
Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BACKWARD: GTTTTCCCAGTCACGACG
Plate: 63 row: E column: 13
Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Single pass sequencing. Bases call v0.980904.e. Vector identified by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST discovery in swine
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                            EST
                                      Bos taurus
                                                         COW
                                                                                           BE476432.1 GI:9595965
                                                                                                                BE476432
                                                                                                                               159670 BARC 5BOV Bos taurus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tlssue_type="pooled"
/tlssue_type="pooled"
/lab_host="DH10B"
/note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
/note="Vector: pCMV SPORT6; Site_1end 11, 13, 15, 20
Library made from pooled tissue from day 11, 13, 15, 20
and 30 embryos."
147 c 176 g 99 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="MARC 1PIG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9823"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Sus scrofa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21.18; 76.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 247.8; DB 1
Pred. No. 3.1e-47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                    517 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       called and alt_trimmed with phred
                                                                                                                               5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cross_match with the -minscore
                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 527;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   143
                                                                                                                                                                                                                                                                                                                         492
                                                                                                                                                                                                                                                                                                                                                                                                432
                                                                                                                                                                                                                                                                                                                                                                                                                                323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
RESULT 7
AV601192
                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                      Qy
     KEYWORDS
                       VERSION
                                      ACCESSION
                                                                      DEFINITION
                                                                                                                                                                  В
                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                      δô
                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                  475
                                                                                                                                                                                                324
                                                                                                                                                                                                                               415
                                                                                                                                                                                                                                                              264
                                                                                                                                                                                                                                                                                            355
                                                                                                                                                                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                                                                                         295
                                                                                                                                                                                                                                                                                                                                                                                        144
                                                                                                                                                                                                                                                                                                                                                                                                                       235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175 GTGCTGGTGCTGGCCGTGCTGGCAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                             84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCCCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24
                                                                                                                                                                               GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                             CTTCAGAACAGCAATCGGGATGGAGCCGCCTTCCTTTCTGTTC 517
                                                                                                                                                                                                                         ATCTCTGAGATGATAATTCATGACGTGCAACTGAGCGATGCCGGGCAAGTCAAATGCAGC
                                                                                                                                                                                                                                                       ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                     GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                     GGCTGGAAGCTCATGTGGGGCTCTCAGTGACATGGTGTGTGCTAAGCGTCAGGCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                               CCCAAGAATGTCACAGCCCTGAAGGGCTCGGAGGCCTCGCTTCAACTGCACCATCTCCCAG 294
                                                                                                                                                                                                                                                                                     GAGACCATCATCACCAGTGACCGCTTCACTTCGGCAAGCTACCAAGAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTCGTCATGTGGGCTCTGAGAGGCACAGTGGTGCTGAGCATGACACCTAAT 354
                                                   AV601192
5', mRNA
   AV601192
AV601192.1 GI:9723510
EST
                                                                                 AV601192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BACKWARD: GTTTTCCCAGTCACGACG
Plate: 27 row: H column: 19
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 Rm 2A, Beltsville, MD 20705, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mapping of Expressed Sequence Tags from a normalized bovine mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Sonstegard TS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sonstegard, T.S., Capuco, A.V., Van Tassell, C.P., Ashwell, M.S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 517)
                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301 504 8416
301 504 8414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tads@anri.barc.usda.gov
                                                                 Bos taurus kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Vector: PCMV SPORT6; Site_1: NotI; Site_2: SalI; Library made from pooled mRNA isolated from mammary tissues at eight physiological, developmental, and disease states."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="BARC 5BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 с
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 199; DB 10;
Pred. No. 7.1e-36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165 g
                                                                                524 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                 tetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102 t
                                                                 Bos
                                                                                mRNA
                                                               taurus cDNA clone E1KI002H04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 517;
                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                              EST 27-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -minscore 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                          474
                                                                                                                                                                                                                                                                                       414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             ... Qy
SOURCE
                                                                                                                                                           멂
                                                                                                                                                                                      Ω
                                                                                                                                                                                                                       Д
                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
```

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                         316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
       496
                                                                                           436
                                          324 CTCCAGAACAGTCGCCTGCATGGATCTGC 352
                                                                                                                                        264
                                                                                                                                                                                376
                                                                                                                                                                                                                                                                                                                   144
                                                                                                                                                                                                                                                                                                                                                                256
                                                                                                                                                                                                                        204 GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       196
                                                                                                                                                                                                                                                                                                                                                                                                   84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24 GAGATGGGCCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGGTAATGAAGTCATAGAAGGC 83
                                                                                                                   ACCTCGGAGATGATCCACCACAATGTGGAGCCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                              GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG 203
CTTCANAACAGCAATCGGGATGGAGCCGC 524
                                                                                      ATCTNTGAGATGATAATTCATGACGTGCAACTCAGCGATGCCGGGCAAGTNAAATGCAGC
                                                                                                                                                                             GAGACCATCATCACCAGTGACCGCTTCACTTCGGCAAGCTACCAAGAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                  GGCTGGAAGCTCGTCATGTGGGGCTCTGAGAGGCACAGTGGTGCTGAGCATGACACCTAAT
                                                                                                                                                                                                                                                                                                                                                         CCCAAGAATGTCACAGCCCTGAAGGGCTCGGAGGCTCGCTTCAACTGCACCATCTCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCTGGTGGTCCTGGCCGTGCTGGCAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shirakawa Institute of Animal Genetics Odakura, Nishigo, Nishi-shirakawa, Fukushima 961-8061, Japan Tel: 81-248-25-5641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Single pass sequencing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: kazusugi@cocoa.ocn.ne.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fax: 81-248-25-5725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Animal Genetics Division
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Yoshikazu Sugimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic Acids Res. 29 (22), E108 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Establishment of a high throughput EST sequencing system using poly(A) tail-removed cDNA libraries and determination of 36,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Sugimoto, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Takasuga,A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bovine ESTs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21570554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 524)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone was obtained from a polyA-deleted cDNA library.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_btay=
/lab_host="DH10B"
/note="Vector: pZL1; Site_1: Sal1; Site_2: Not1;
/note="Vector: pZL1; Site_1: Sal1; Site_2: Not1;
was deleted from a Not1 site"
was deleted from a Not1 site"
135 c 168 g 96 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:9913"
/clone="EIKI002H04"
/clone=lb="Bos taurus kidney fetus"
/tissue_type="kidney"
/dev_stage="fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hirotsune, S., Itoh, R., Jitohzono, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 191.6; DB 10;
Pred. No. 3.7e-34;
0; Mismatches 87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                        263
                                                                                                                                 323
                                                                                                                                                                             435
                                                                                                                                                                                                                                                                                                                                                         315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aso,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

RESULT 8 AG069679 LOCUS ACCESSION VERSION KEYWORDS DEFINITION

AG069679 AG069679.1 Pan troglodytes DNA, clone: AG069679 troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male Library clone:PTB-060r12.F. GI:16621481 622 bp 2 bp DNA PTB-060F12.F, linear GSS (GSS 03-NOV-2001 sequence

Yada, T.,

```
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                               AG107877
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                         REFERENCE
                                                                                                                                              SOURCE
                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                     VERSION
                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474 TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 533
                                                                                                                                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                                                                                                                                                                                                                                                                                            594 TGCGTGGCTACCTGGAAGAGCCTGAAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTG 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 191
                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                              654 ATTCGGTGTCCCCAAGACACTGGAGGTGGT 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              534 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 TCCGCGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                       ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                        Pan troglodytes DNA, clone: PTB-112N07.F, genomic survey sequence. AG107877
AG107877.1 GI:16728395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Totoki,Y., Watanabe,H. and Sakaki,Y.
BAC end sequences of Library PTB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fujiyama, A., Hattori, M., Toyoda, A., Taylor, T.D., Yada, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                           BAC
                                                                                                                                              Pan
Totoki,Y., Watanabe,H. and Sakaki,Y
                   Fujiyama,A.,
                                                                                                     Pan troglodytes
                                                              Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 622)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              165
                                                                                                                    troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male Library clone:PTB-112N07.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vector : pKS145
R.Site 1 : SacI
R.Site 2 : SacI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing: -21M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
153 c 128 g 176 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="PTB-060F12.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Pan troglodytes"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                               Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            153 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16.2%;
94.3%;
                     Hattori, M.,
                                                            Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 190.8; DB 1
Pred. No. 5.8e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                       Toyoda, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 17;
                       Taylor, T.D., Yada, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 622;
                                                                                                                                                                                                                                                      GSS 03-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                    AA265274
                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192 TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      132 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         474 TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           654 ATTCGGTGTCCCCAAGACACTGGAGGTGGT 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      72 TCCGCGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA1CTCACTGTG 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BAC end sequences of Library PTB Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 (bases 1 to 677)
Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
    Unpublished (1996)
Contact: Marra M/M
                                                                                    Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T. Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                      mx91d09.r1 Soares mouse NML Mus musculus cDNA clone IMAGE:693713 5', mRNA sequence.
                                               The WashU-HHMI Mouse EST Project
                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 471)
                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                EST
                                                                                                                                                                                                                                                                                                   AA265274.1 GI:1901370
                                                                                                                                                                                                                                                                                                                      AA265274
                                                                                                                                                                                                                                                                                                                                                                                   AA265274
                                                                       Waterston, R.
                                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.Site 1 : SacI
R.Site 2 : SacI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequencing: -21M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vector
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
159 c 143 g 207 t
        Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Pan troglodytes"
/db_xref="taxon:9598"
/clone="PTB-112N07.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16.2%;
94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : pKS145
: SacI

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 190.8; DB 17; Pred. No. 5.9e-34;
                                                                                                                                                                                                                                                                                                                                                                                   471 bp
                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 677;
```

0,

Gaps

```
RESULT 11
AW990468
                                                 ORGANISM
                                                                                      KEYWORDS
                                                                                                              VERSION
                                                                                                                               ACCESSION
                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                            264 ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                           390
                                                                                                                                                                                                                                                                                                                                              324
                                                                                                                                                                                                                                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                 CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAG 435
                                                                                                                                                                                                                                                                                                                                      GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 149
                                                                                                                                                                                                                                                                                                                                                                         ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246;
                                                                                                                                                       oll D mRNA linear EST 02-JUN-2000 uf37d05.yl Soares_mammary_gland_NMLMG Mus musculus cDNA clone IMAGE:1513545 5' similar to TR:060962 060962 L549.1.; mRNA segmence
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                           Mus musculus
                                                                                                                               AW990468
                                                                                                                                                                                                       AW990468
                                                                   nouse mouse
                                                                                                          AW990468.1 GI:8186027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGI:427273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington University School of MedicineP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     primer: ~28m13 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        quality sequence stop: 454.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                constructed and normalized by Bento Soares and M.Fatima Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="Soares mouse NML"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:693713"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="Liver"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 186; DB 9;
Pred. No. 7.4e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122 g
                                                                                                                                                                                                   611 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105 t
                                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 471;
                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

Š В Š B Ş 밁 Qy В Š В γ

```
ACCESSION
VERSION
                                                                                                                                                                                                                    RESULT 12
BG173684
                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                          SOURCE
                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                    Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                         399
                                                                                                                                                                                                                                                                                                                                       264 ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGAIGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204 GAGCCCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              219 GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      144 GCCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAG 444
                                                                                                                                                                                                                                                                                                                                                                               ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        246;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                             Mus musculus
                                                                                           EST
                                                                                                                                BG173684
                                                                                                                                                                   BG173684 931 k
602336823F1 NCI_CGAP_Mam1 Mus
                                                                                                                                                    mRNA sequence.
                                                                     house mouse.
                                                                                                               BG173684.1 GI:12680387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 611)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGI:940397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMAGE Consortium (info@image.llnl.gov) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         was constructed by Bento Soares and M. Fatima Bonaldo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares_mammary_gland_NMLMG"
/sex="female (lactating)"
/tissue_type="mammary gland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:1513545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 7.6e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   156 g
                                                                                                                                                                                              931 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   474.
                                                                                                                                                                      bp mRNA linear EST 06-FEB-2001 musculus cDNA clone IMAGE:4459973 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        148 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 611;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Library "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                             KEYWORDS
                                                                                                                                                                                                                     AK008060
                                                                                      VERSION
                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                 431
                                                                                                                                                                                                                                                                                                                                                                                                        371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               131 GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24 GAGATGGGGCTTGTGATTTTCCTCCACGCTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                        ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 250
                                                                                                                                                                                                                                                                                                               CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAG 476
                                                                                                                                                                                                                                                                                                                                                         ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: LIAM10260 row: n column: 06 High quality sequence stop: 628.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                            Mus musculus adult male small intestine cDNA, RIKEN enriched library, clone:201003D20:homolog to IGSF5 (FRAGMENT), full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      found through the I.M.A.G.E. Consortium/LLNL at:
clone:2010003D20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA sequencing by: Incyte Genomics, Inc. clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                    AK008060.1 GI:12842009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 931)
       ; CAP trapper.
musculus (strain:C57BL/6J) adult male small intestine cDNA to musculus (strain:C57BL/6J) adult male small intestine cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             providing samples: Gilbert Smith, NIH"
a 277 c 242 g 179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Site_2: Not1; Cloned unidirectionally. Primer: Oligo Library constructed by Life Technologies. Investigator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall;
Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:4459973"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 186; DB 12; Pred. No. 7.9e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                           HTC 19-JAN-2002
full-length
PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                          TITLE
                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arakawa, J., Shilling, Y., Konno, H., Adachi, J., Fukuda, S., Aizawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Aizawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Aizawa, K., Casayant, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casayant, T., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casayant, T., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Tomita, M., Quackenbush, J., Schrimal, L. M., Staubli, F., Suzuki, R., Tomita, M., Quackenbush, J., Schrimal, L. M., Staubli, F., Suzuki, R., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Wagner, L., Washin, G., Blake, J., Boffelli, D., Bojunga, N., Carninci, P., Ge Bonaldo, M. F., Brownstein, M. J., Bult, G., P., Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Marchionni, M., Ringyald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sand, K., Wang, K. H., Weitz, C., Whittaker, C., Wilming, L., Yoshida, K., Washida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., Sand, M., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carninci, P. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                       Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Arakawa, T., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, T., Sohirail, L., Shibata, X., Shibata, Y., Shinagawa, A., Shiraki, T., Shibata, Y., Shibata, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Carninci, P., Shibata, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High-efficiency full-length cDNA cloning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kawai, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11042159
Direct Submission
Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
Physical and Chemical Research (RIKEN), Laboratory for Genome
Exploration Research Group, RIKEN Gemomic Sciences Center (GSC).
                                                                                                                                                                                                                                                        Sogabe,Y., Suzuki,H., Tagami,M., Tagawa,A., Takahashi,F., Tanaka,T., Tejima,Y., Toya,T., Yamamura,T., Yamanaka,I., Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .0349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 1552)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hayatsu, N., Sugahara, Y., Shibata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ishii,Y.,
```

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
264 ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC 323
                                                                                                                     204 GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                          144 GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                               103 GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 162
                                                                                                                                                                                                                                                                                                         163 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 222
                                                                                                                                                                                                                                                                                                                                                                  84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                               GGACCCATCATCACCAACAACGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                 GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. First strand cDNA was primed with a primer 15' GARAGARGGATCCAGAGGCTCTTTTTTTTTTTTTTTTTVN 3'], cDNA was prepared by using trehalose thermo-activated reverse transcriptase prepared by using trehalose thermo-activated reverse transcriptase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization to Rot = 5.0 and subtraction to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Please visit our web site (http://genome.gsc.riken.go.jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax:81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence[5/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOLR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /protein_id="Bab25436.1"
/db_xref="GI:12842010"
/db_xref="GI:12842010"
/db_xref="MGD:NGI:1919308"
/translation="MedSwRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
/translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
NCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFTYASYNGTDSFISELLIHDVQPS
DSGSYQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIII
FCCCCASRREKEESTTQNEIRKSANNRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="data source:SPTR, source key:Q9NSI5, evidence:ISS
homolog to IGSF5 PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /tissue_type="small intestine"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="FANTOM_DB:2010003D20"
/db_xref="MGD:MGI:1904786"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="2010003D20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /strain="C57BL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Second strand cDNA was prepared with the primer adapter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         369 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.8%; Score 186; DB 11; 71.1%; Pred. No. 8.4e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               374 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76J™
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               379 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                  342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

밁 ρ 밁 Ş В δõ 밁

QΥ В δ

90

84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143

GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 149 GAGATGGGGCTTCTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83

Gaps

```
ORIGIN
                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
AI425363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COS
     Matches
                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                403 CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAG 448
                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Person,B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ritter,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R.,
                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                      POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGI:427273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Marra M/WashU-NCI Mouse EST Project 1999 Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae; Mus. 1 (bases 1 to 486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              correct orientation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4444 Forest Park Parkway, Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AI425363.1 GI:4271294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mx91d09.y1 Soares mouse NML Mus musculus cDNA clone IMAGE:693713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI425363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nouse mouse.
                                                                                                  119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA sequence.
     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     quality sequence stop: 459
                                                                                                                                           Bonaldo."
                                                                                                                                 constructed and normalized by Bento Soares and M. Fatima
                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
/clone="IMAGE:93713"
/clone_lib="Soares mouse NML"
/tissue_type="Liver"
                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                    /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
                                                                                                133 с
                   15.7%;
   0,:
                   Score 185; DB 9;
Pred. No. 1.3e-32;
                                                                                              126 g
 Mismatches 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ďď
                                                                                              107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA
                                   Length 486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Louis, MO 63108, USA
                                                                                              1 others
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 15-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in the
```

```
RESULT 15
BE376590
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                   δã
                                                               밁
                                                                                                   Qy
                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204
                        84
                                                                                        24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCCAGAACAGTCGCCTGCATGGATCTGCTTACCGTTACCGTCCAAG 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCTGGAAGCTCATGTGGGGCTCTCAGTGACATGGTGGTGGTAGGCGTCAGGCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCNAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTCGGAGATGATCCACCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCTCGGAGTTGATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                   CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                             GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 124
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cyapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
BE376590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BE376590 663 bp mRNA linear 601226419F1 NCI_CGAP_Maml Mus musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 663)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE376590.1 GI:9321955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Plate: LLAM8743 row: f column: 06 High quality sequence stop: 498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse
                                                                                                                                                                                                                                                         143
                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                        /clone="IMAGE:3584645"
/clone_lib="NCI_GAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_"stage="bH10B"
                                                                                                                                                                                                                                                       providing samples: Gilbert Smith, NIH"
193 c 170 g 157 t
                                                                                                                                                                                                                                                                                            /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT Library constructed by Life Technologies. Investigator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                       15.7%;
                                                                                                                                                     0;
                                                                                                                                                     Score 184.4; DB 10;
pred. No. 1.8e-32;
0; Mismatches 101;
      Indels
                                                                                                                                                                                             Length 663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 21-JUL-2000
IMAGE:3584645 5',
                                                                                                                                                          0;
                                                                                                                                                          Gaps
                                                                                                                                                            0
```

```
В
                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                     οy
                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                     δÃ
Search completed: April 29, 2003, 09:24:07 Job time : 1924.64 secs
                                                                                                                                     В
                                                                                                       324
                                                                                                                                         305
                                                                                                                                                                         264
                                                                                                                                                                                                         245
                                                                                                                                                                                                                                           204
                                                                                                                                                                                                                                                                            185
                                                                                                                                                                                                                                                                                           144 GGCTGGAAGCTCATCATGTGGGGCTCTCAGTGACATGGTGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                             125 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 184
                                                                     CTGCAGAACAGCCATGGGTTCGGATCTGCCTTCCTCTCAGTGCAAG
                                                                                                     GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC 304
                                                                                                                                                                                                                            GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                           ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGGATCCGTGCAATGCAGC
                                                                                                                                                                       ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC 323
                                                                            410
                                                                                                                                                                                                                                                  263
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
  0 0 0 0 0 0
                                                                                                                                                                                                                                                                       0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-729-264-1
1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            709820 seqs, 544064369 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          April 28, 2003, 16:24:32; Search time 139.373 Seconds
  122.9
120.12
120.12
130.68
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130.88
130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     //ggn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
//ggn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
//ggn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Published_Applications_NA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctgtctgcccatctgaataa.....gtaatacaactgtagtatag 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                        3309400
293
459
1791
2424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000000000
                                                                                                                                                                                                            401
398
3577
1310
2614
3263
4286
6604
455
                                                                                                                                                                                                         9 9
                                                                                    10
10
10
9
                                                                                                                                                                                                                                                                                                                                                                                                                                 10
              9 US-10-008-739A-1
9 US-09-849-243-13
9 US-09-849-243-15
9 US-09-849-243-14
10 US-09-880-107-1748
10 US-09-738-626-544
10 US-09-738-626-544
10 US-09-738-626-544
10 US-09-738-626-544
9 US-09-738-626-544
9 US-09-738-626-18923
10 US-09-864-761-2182
10 US-09-864-761-2182
10 US-09-816-364-761
10 US-09-816-761-2182
10 US-09-217A-130
US-10-029-217A-30
US-10-029-217A-30
US-10-029-217A-30
US-10-029-217A-30
                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-918-995-3342
US-09-864-761-16305
US-09-983-965-4945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (without alignments)
9173.565 Million cell updates/sec
              Sequence 3342, Ap
Sequence 16305, Ap
Sequence 1, Appl.1
Sequence 1, Appl.2
Sequence 13, Appl
Sequence 15, Appl
Sequence 14, Appl
Sequence 17, Appl
Sequence 151, Appl
Sequence 151, Appl
Sequence 151, Appl
Sequence 151, Appl.3
Sequence 18923, Ap
Sequence 18923, Ap
Sequence 2182, Appl.1
Sequence 25, Appl.1
Sequence 25, Appl.1
Sequence 30, Appl.1
Sequence 30, Appl.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
```

^	C	_		o						a		_	a	^					^	a	^	^	_		
			~		~			(.)			(.)														
5	14	ω	2	1	0	39	88	37	8	35	34	3	2	31	30	29	28	27	8	5	24	23	22	21	0
4	4	40	40.:	40.:	40.:	40.:	40.	40.	40.	40.	40.	40.	40.	40.	40.	4.	41.2	41.:	41.	41.	41.	41.	41.	41.	41.
0	O	N	N	N	N	N	Ν	N	4	**	on	æ	в	ш	8	-	N	N	4	01	O1	on	O)	O,	σı
3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4									ω . 5								
488	27	8345	252	114	57	55	54	21	267	95	54	632	617	253	235	251	725	42	257	687	650	650	389	55	23
	0 9			3								2 10					5 10		2 10					4 1	8 1
υs	US	US						_	US-					_					_	_	_	_	_	0	0
US-09-918-995-19918	10	US-09-811-469-3	US-09-476-242-15	US-09-938-842A-1399	1S-0	US-09-919-580-475	1S-0	US-09-728-444-25	:-10	US-10	US-09-918-995-11012	US-09-917-800A-1546	US-09-916-145-1	60-3	IS-0	US-09-476-242-16	US-09-919-580-878	-09	US-09-925-300-486	US-09-735-367B-1	0-S	US-0	US-0	0-SD	US-0
-918	-007	-81	9-47	-938	9-91	9-91	9-91	-728	10-003-295-	10-078-090-83	-918	9-91	9-91	-822	9-47	9-47	9-91	-918	9-92	9-73	9-73	9-96	-09-735-367B-5	-09-864-761-7357	-09-864-761-24079
99	-557-	-46	16-2	8-84	9-5	.9-5	.9-5	3-44	1-29	9-09	9-99	.7-8	6-1	-84	16-2	16-2	9-5	9-99	25-3	35-3	35-3	39-3	35-3	4-7	4-7
5-1	7-8	9-3	42-	2A-	-08	-08	-08	4-2	5-1	8-0	5-1	00A	45-	6-1	42-	42-	-08	5-1	-00	67B	67B	47-	67B	61-	61-
991			15	139	570	475	371	G		w	101:	-15	_	29	26	16	878	021:	486	Ļ	9	171	'n	735	240
ω				G							2	46						N						7	79
Se	S	Se	"	Se	۲۵	70	"	Se	Se	Se	Se.	"		Se	70		70	Se.	"	70	"	.	70	70	70
Sequence	Sequence	Sequence	3equ	eque	Sequence	Sequence	Sequence	sequence	Sequence	Sequence	Sequence	Sequence	Sequence	egue	Sequence	Sequence	Sequence	eque	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
nce	nce	nce	enc	nce	enc	enc	enc	nce	nce	nce	nce	enc	enc	nce	enc	enc	enc	nce	enc	enc	enc	enc	enc	enc	enc
199	8	ω	Sequence 15,	Sequence 1399	e 570	e 475,	e u	25	μ,			e 15	e 1,	Sequence 129		e 16,	e 8	Sequence 1021		e 1,	e 9,	e 1:	Ω O		
19918, A	App	3, Appli	~	•	`			ĄĘ	 Appli 	Ą	312,	e 1546, Ap	Ą	9, A		, D	878, App	ν				71,	ĄĘ	7357,	24079
D	ĭ)1 i	1qq)	Αp	App	App	App	Appl	11	Ď	A	Αp	φli	ďď	Appl	1qq	App	Α	App	Appli	Appli	App	Appli	Αþ	, >
					-	-	-															-		-	

ALIGNMENTS

```
PRIOR PILLING DATE: 1999-01-20
PRIOR FILING DATE: 1999-01-20
NUMBER OF SEQ ID NOS: 38054
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 3342
LENGTH: 474
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                Qy
                                                                                                                                    Qy
                                   В
                                                                                                     B
                                                                                                                                                                         В
                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                               US-09-918-995-3342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 1
US-09-918-995-3342
                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 272; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3342, Application US/09918995 Publication No. US20030073623A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES
TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES
FILE REFERENCE: 20411-756
CURRENT APPLICATION NUMBER: US/09/918,995
CURRENT FILLING DATE: 2001-07-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Hyseq, Inc
                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
LOCATION: (1)...(474)
OTHER INFORMATION: n = A,T,C
                                                                   1019
1079 GCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTAAICTGGC 1138
                                   174
                                                                                                     114
                                                                                                                                       959
                                                                                                                                                                                       899 ATTTCAAAAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAA 958
                                                                                                                                                                       54
                                 CAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCA 1078
                                                                                                                   ACTTTTAAGGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAA 113
                                                                                                     Conservative
                                                                                                                                                                                                                                                           22.9%;
98.2%;
                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                               암
                                                                                                                                                                                                                                         Score 269; DB 9; Length 474; Pred. No. 1.9e-72; O; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                 G
                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                         Gaps
                                                                                                     173
                                   233
```

밁 Š 밁

```
; OTHER INFORMATION: MAP TO AF121782.1
; OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = US-09-864-761-16305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-09-864-761-16305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 16305, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                     SOFTWARE: Annomax Sequence Listing Engine vers. SEQ ID NO 16305
                                       Best Local
                                                        Query Match
                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Hanzel, David K.

APPLICANT: Chen, Wensheng
TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
FILE REFERENCE: Acomica-x-1
CURRENT FILLING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US/09/864,761
PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                  ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                   LENGTH: 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  294 CAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00667
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00664
OR FILING DATE: 2001-01-30
OR APPLICATION NUMBER: PCT/US01/00669
OR APPLICATION NUMBER: PCT/US01/00669
OR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US01/00661
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/USO1/00668
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/USO1/00663
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/USO1/00662
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: GB 24263.6
FILING DATE: 2000-10-04
APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 09/632,366 FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2000-02-04
APPLICATION NUMBER: US 60/207,456
FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-66-30
APPLICATION NUMBER: US 09/774,203
FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 2001-01-30
APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 194;
                                         Similarity
                   Conservative
                                       16.2%;
97.0%;
                   0;
                                     Score 190.4; DB 10; Pred. No. 2.7e-48;
                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330
                   6,
                                                           Length
                                                             401;
                   0,
                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     293
                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                      γo
                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Clone ID: 26-LIB34-017-Q1-E1-G9 US-09-983-965-4945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-983-965-4945
                                                                                                                          US-10-008-739A-1/c
                                                                              Sequence 1, Application US/10008739A Patent No. US20020161194A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence 4945, Application US/09983965 Patent No. US20020137160A1
                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 4945
LENGTH: 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
APPLICANT: Pfizer Inc.
APPLICANT: Castleberr
APPLICANT: Lu, Bihong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/983,965
CURRENT FILING DATE: 2001-10-26
PRIOR APPLICATION NUMBER: US 09/465,231
PRIOR FILING DATE: 1999-12-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Mathialagan, Nagappan TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND TITLE OF INVENTION: MUSCLE AND FAI DEPOSITION FILE REFERENCE: 37-21(10297)C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: US 60/113,678 PRIOR FILING DATE: 1998-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Warren,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 5912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102 CTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATG
                                                                                                                                                                                                                341 GAGACCATCATCACCAGTGACCGCTTCACTTCGGCAAGCTACCAAGAGGGCCGGAACT 398
                                                                                                                                                                                                                                                                                                   281
                                                                                                                                                                                                                                                                                                                      144 GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGGTAGGCGTCAGGCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            382 GACCGCTTCACCTCTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                262
                                                                                                                                                                                                                                                       204 GAGCCCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACT 261
                                                                                                                                                                                                                                                                                                                                                                                  221 CCCAAGAATGTCACAGCCCTGAAGGGCTCGGAGGCTCGCTTCAACTGCACCATCTCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   161 GTGCTGGTGGTCCTGGCCGTGCTGGCAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202 TACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                           84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAAATGCAACAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCGCTTCACCTCTCAGAG 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTGGAAGCTCGTCATGTGGGCTCTGAGAGGCACAGTGGTGCTGAGCATGACACCTAAT 340
                                                                                                                                                                                                                                                                                                                                                                                                                       CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGAAGGGCTCCCAGGCTCCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12.1%;
Similarity 74.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Byatt, John C.
Mathialagan, N
Castleberry,
Lu, Bihong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tao, Nengbing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wesley C.
                     Tessa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            401

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 142; DB 10;
Pred. No. 2.2e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                    280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               261
```

0

```
LENGTH: 3577
TYPE: DNA
ORGANISM: Canine
US-10-008-739A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-849-243-13/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 13, Application US/09849243 Patent No. US20020157127A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 3.9%;
Best Local Similarity 65.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO
                                                                                                                                               INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 1310 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/008,739A CURRENT FILING DATE: 2002-04-15 NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Smock, Steven L.
TITLE OF INVENTION: The Canine Androgen Receptor
FILE REFERENCE: PC10893AGPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                573 TTGCTGCTGCTGCTGCTGCTGCCGCTGCTGAAGGAG 532
                                                                                                                                                                                                         APPLICATION NUMBER: US/09/849,243
FILING DATE: 07-May-2001
ATTORNEY/AGENT INFORMATION:
NAME: Granados, Patricia D.
REGISTRATION NUMBER: 33,683
REFERENCE/DOCKET NUMBER: 38005-0148
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)912-2000
TELEPHONE: (202)912-2020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     836 TGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAG 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          776 GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTG 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 20006
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
SEQUENCE DESCRIPTION: SEQ ID NO: 13:
                                                                         MOLECULE TYPE: cDNA
                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE STREET: 1666 K Street, N.W., Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Kirschbaum, Bernd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67;
                  NAME/KEY:
LOCATION:
                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Owen, Thomas A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Meisterernst, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Berglund, Erick
                                    exon
                    1..1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NON-HUMAN ANIMALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPLEXES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 46; DB 9; Length 3577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 0.0036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM TRANSGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
Sequence 15, Application US/09849243; Patent No. US20020157127A1; GENERAL INFORMATION:
                                                                    RESULT 7
US-09-849-243-15/c
                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Homo sapiens US-09-822-846-491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
US-09-822-846-491/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-849-243-13
                                                                                                                                                                                                                                                                      Query Match 3.8%;
Best Local Similarity 76.4%;
Matches 55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 491
LENGTH: 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 491, Application US/09822846 Publication No. US20030027139A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Jacobs, Kenneth
APPLICANT: McCoy, John M.
APPLICANT: LaVallie, Edwar
APPLICANT: Collins-Racie,
APPLICANT: Evans, Cheryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 2000-04-06 NUMBER OF SEQ ID NOS: 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/822,846
CURRENT FILING DATE: 2001-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Genetics Institute, Inc.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING NOVEL SECRETED PROTEINS
FILE REFERENCE: GIN 6400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/195,605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                      2119 GCTGCTGCCGCA 2108
                                                                                                                                                                                                    868 GCTGTAGAAGAA 879
                                                                                                                                                                                                                                  808 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         808 GCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            276 GCTG 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   868 GCTG 871
APPLICANT: Kirschbaum,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  h 3.8%;
Similarity 81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Merberg, L.
Merberg, Maurice
Mechae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gulukota, Kamalakar
Graham, James R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fechtel, Kim
Howes, Steven H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wong, Gordon G.
Clark, Hilary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McCoy, John M.
LaVallie, Edward R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Resnick, Richard J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Steininger II, Robert J. Bowman, Michael R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Agostino, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Collins-Racie, Lisa A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Spaulding, Vikki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               2.0
                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                      Score 44.8; DB 9; Length 2614; Pred. No. 0.0068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 44.8; DB 9; Length 1310;
Pred. No. 0.0043;
0; Mismatches 12; Indels 0
                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                          17;
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Berglund,

```
RESULT 8
US-09-149-243-14/c
; Sequence 14, Application US/09849243
; Patent No. US20020157127A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-849-243-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (202)912-20 INFORMATION FOR SEQ ID NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1370 GCTG 1367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808 GCTGCTGCTGCCGCCGTCGTTGTTGTGCCTGCAACTGCTGCTGCCGTTGTTTTTTT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                868 GCTG 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J.8%;
Local Similarity 81.2%;
es 52; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-TOS/MS-DOS
SOFTMARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
CORRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE
ADDRESSEE: 1666 K Street, N.W., Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION COMPLEXES FROM TRANSGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Granados, Patricia D.
REGISTRATION NUMBER: 33,683
REFERENCE/DOCKET NUMBER: 38005-0148
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)912-2000
TELEFAX: (202)912-2020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/849,243
FILING DATE: 07-May-2001
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: exon
LOCATION: 1..3263
SEQUENCE DESCRIPTION: SEQ ID NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linea MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 3263 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                    NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE STREET: 1666 K Street, N.W., Suite 300
                                                                                                                                                                                    Polites, Greg
TITLE OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION
                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
COUNTRY: USA
                                    CITY: Washington
                   STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Meisterernst, Michael
Polites, Greg
                                                                                                                                                                                                                           Berglund, Erick
Meisterernst, Michael
                                                                                                                                                                                                                                                                      Kirschbaum, Bernd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON-HUMAN ANIMALS
                                                                                                                                          NON-HUMAN ANIMALS
                                                                                                                                                                  COMPLEXES FROM TRANSGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 44.8; DB 9; Length 3263; Pred. No. 0.0079;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
US-09-880-107-1748/c

Sequence 1748, Application US/09880107

Patent No. US20020142981A1

GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; SEQUENCE DESCRIPTION: SEQ ID NO: 14: US-09-849-243-14
                                                                                          US-09-880-107-1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.8%;
Best Local Similarity 81.2%;
Matches 52; Conservation
                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 1748
3.8%; Score 44.8; DB 10; Best Local Similarity 76.4%; Pred. No. 0.013; Matches 55; Conservative 0. Mignature 10.
                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/880,107
CURRENT FILING DATE: 2001-06-14
PRIOR APPLICATION NUMBER: US 60/211,379
PRIOR FILING DATE: 2000-06-14
PRIOR APPLICATION NUMBER: US 60/237,054
PRIOR FILING DATE: 2000-10-02
NUMBER OF SEO ID NOS: 3950
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Gene Logic, Inc.
TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer
FILE REFERENCE: 44921-5028-WO
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Horne, Darci T.
APPLICANT: Vockley, Josep
APPLICANT: Scherf, Uwe
APPLICANT: Gene Logic, In
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (202)912-2020 INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS:
                                                                                                           OTHER INFORMATION: Genbank Accession No. US20020142981A1 D83783
                                                                                                                                                    TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 6604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2707 GCTG 2704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               868 GCTG 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          808 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: 1BM PC compatible

COMPUTER: PRIM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)912-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Granados, Patricia D.
REGISTRATION NUMBER: 33,683
REFERENCE/DOCKET NUMBER: 38005-0148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/09/849,243 FILING DATE: 07-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 4286 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: exon
LOCATION: 1..4286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Joseph G

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 44.8; DB 9
Pred. No. 0.0095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 9; Length 4285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                       Length 6604;
                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                     0;
```

Qy

172 PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220

밁

182

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
US-10-176-913-584
                                                                                                                                                                                                                                                                                                                                                 US-10-180-552-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-176-913-584
                                                                                                                                              APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audrey
APPLICANT: Godowski, Paul
APPLICANT: Gurney, Austin I
                                                                                                                                                                                                                                                                               Sequence 584, Application US/10180552 Publication No. US20030022300A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 6.1%; Score 128; DB 9; Length 708; Best Local Similarity 23.1%; Pred. No. 0.095; Matches 53; Conservative 41; Mismatches 95; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Publication No. US20
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 584,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
APPLICANT:
                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prior Application removed - See file Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3430R1C66
CURRENT APPLICATION NUMBER: US/10/176,913
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Homo Sapien
                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                     182 PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        132 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           172 PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74 SORYDOGGNETS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
  양양
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
Godowski, Paul J.
                                        Zhang, Zemin
                                                                                                                                                Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/10176913
b. US20030022298A1
                                                                                   Smith, Victoria Watanabe, Colin K.
                                                                                                                                 Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chen, Jian
                                                          Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11;
```

```
Search completed: April 29, 2003, 20:17:26
Job time: 47.0659 secs
                                                                                                 밁
                                                                                                                                            QY
                                                                                                                                                                                            В
                                                                                                                                                                                                                                      QΥ
                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo Sapien US-10-180-552-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 6.1%; Score 128; DB 9; Length 708; Best Local Similarity 23.1%; Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: P3430R1C153
CURRENT APPLICATION NUMBER: US/10/180,552
CURRENT FILING DATE: 2002-06-25
Prior Application removed - See File Wrap;
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                 172
                                                                                               182 PGSYESTLTLTPFSHDDGATFYCRARSQALPTGRDTAITLSLQYPPEYT 230
                                                                                                                                                                                              132 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                        72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                  14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                            PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                           LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE--
                                                                                                                                                                                                                                                                                                                                        SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                        AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

RESULT 11 US-10-175-752-584

GENERAL INFORMATION:

Sequence 584, A Publication No.

Application US/10175752

US20030022295A1

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Homo Sapien
US-10-175-752-584
                                                                                                                                                                                                                                                                                                                                            Sequence 584, Application US/10176482 Publication No. US20030022296A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 584
LENGTH: 708
                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                               TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                          CURRENT FILING DATE:
                                            CURRENT APPLICATION NUMBER: US/10/176,482
                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                     APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Zhang, Zemin Transmembrane Polypeptides and Nucleic Title OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/175,752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: P3430R1C60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182 PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     172 PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74 SQRYDQGGNFTS---EMIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity es 53; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                      Smith, Victoria
Watanabe, Colin K.
Wood, William I.
                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul
                                                                                                                        Zhang, Zemin
                                                                                                                                                                                                                        Gurney, Austin L.
                                                                                                                                                                                                       Pan, James
                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                   Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
        removed -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6.1%;
23.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-06-19
                        2002-06-20
See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 128; DB 9;
Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95; Indels 40; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11;
```

```
Вþ
                                                                       B
                                                                                                        ρy
                                                                                                                                                멍
                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                   US-10-176-757-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-176-757-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-176-482-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 584, A Publication No.
                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES
TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: P3430R1C86
CURRENT APPLICATION NUMBER: US/10/176,757
CURRENT FILING DATE: 2002-06-20
                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
132 ---PSYSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72
                                                                                                        74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----
                                                                       72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                               20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----
                                                                                                                                                                                 14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74 SQRYDQGGNFTS---EMITHNVEPSDSGNTRCSLQNSRLHG-SAYLTV------QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPPEAPQVLGG 131
                                                                                                                                                                                                                          53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Smith, Victoria
Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/10176757 o. US20030022297A1
                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P3430R1C86
                                                                                                                                                                                                                                                                                                                                                                                                              removed -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             612
                                                                                                                                                                                                                                         6.1%; Score 128; DB 9; Length 708; 23.1%; Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                            See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41;
                                                                                                                                                                                                                        41; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 128; DB 9; Length 708; Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                        95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95;
                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
                                                                                                                                                                                                                        40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         40;
                                                                                                          -QVMGE 122
                                                                                                                                               --DLPG 71
                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                    171
                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo Sapien US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 9
US-10-173-706-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
              Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 584, Application US/10173706 Publication No. US20030022293A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Publication No. US20030013153Al
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/175,737
CURRENT FILING DATE: 2002-06-19
Prior Application removed - See File Wrapper or Palm
NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Baker, Kevin P.
                                                                                            CURRENT APPLICATION NUMBER: US/10/173,706
CURRENT FILING DATE: 2002-06-17
                                                                                                                                    TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
LENGTH: 7
                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       172 PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            132 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 LFIPSVNLVVAENEPCEVTC ----- LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski, Paul J. Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                 Zhang, Zemin
                                                                                                                                                                                                                                      Smith, Victoria Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                  Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                          Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, Victoria
Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chen, Jian
                                                                                                                                                                                                                 Wood, William I.
                                                                                                                                                                                                                                                                              Pan,James
                                                                                                                                                                                                                                                                                                                                                                                 Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.1%; Score 128; DB 9; Length 708; 23.1%; Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
```

```
Qy
                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                             밁
                                                                                                                                                           В
                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-175-738-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Homo Sapien US-10-173-706-584
밁
                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Hom
US-10-175-738-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 584
LENGTH: 708
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 584, Application US/10175738 Publication No. US20030022294A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Zhang,Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Baker, Kevin P. APPLICANT: Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/175,738 CURRENT FILING DATE: 2002-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182 PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132
182
                                                                                                                 123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                     172 PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                74 SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                        72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                      20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR-----DLPG 7.1
                                                                                                                                                                                                                                                                            14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQRYDQGGNFTS---EMIIHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR-----DLPG 71
PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                           ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53;
                                                                                                                                                                                                                                                                                                                                                                                                                      Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe,Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6.1%;
23.1%;
                                                                                                                                                                                                                                                                                                                                         6.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41; Mismatches
                                                                                                                                                                                                                                                                                                                      41; Mismatches
                                                                                                                                                                                                                                                                                                                                      Score 128; DB 9;
Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 128; DB 9
Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 9; Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95;
                                                                                                                                                                                                                                                                                                                        95; Indels
                                                                                                                                                                                                                                                                                                                                                           Length 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40;
                                                                                                                                                                                                                                                                                                                        40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11;
                                                                                                                                                                                                                                                                                                                          11;
```

뮹

483 SSSFSVS 489

```
; ORGANISM: Homo Sapien US-10-174-590-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-174-590-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT; ORGANISM: homo sapiens US-09-817-487A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-817-487A-2
                                                                                               SEQ ID NO 584
LENGTH: 708
      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 584, Application US/10174590 Publication No. US20030008352A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn version 3.0 SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/09817487A Patent No. US20020150876A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                     Prior application removed NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/174,590
                                                                                                                                                                                                                              TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: No. US20020150876Alartis AG
TITLE OF INVENTION: Selectable Marker Genes
FILE REFERENCE: 4-31193A
                                                                                                                                                                              CURRENT FILING DATE:
                                                                                                                                                                                                                      FILE REFERENCE: P3430R1C42
                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/817,487A CURRENT FILING DATE: 2002-02-14
                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 10
                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         264 RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKG 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              173 SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 ELFIPSVNLVVAENEP------CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159 -SPLRENSRIAVLE------SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEF 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 24.3 es 57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EVFARILRAPESHNVTFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKD
                                                                                                                                                                                                                                                                             Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
                                                                                                                                                                                                                                                                                           Wood, William I.
                                                                                                                                                                                                                                                                                                               Watanabe, Colin K.
                                                                                                                                                                                                                                                                                                                                    Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                      Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen, Jian
                                                                                                                                                                              2002-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.3%;
    6.1%;
                                                                                                                                                     See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36;
  Score 128;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 131.5; DB Pred. No. 0.066;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
  9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95;
Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
```

```
US-10-175-737-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-176-758-584; Sequence 584, A; Publication No.
                                                                            뫄
                                                                                                                                                     В
                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-176-758-584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                                                                                                                                                                                        Query
Best Local Simi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 584
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 23.1 Matches 53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/176,758 CURRENT FILING DATE: 2002-06-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC TITLE OF INVENTION: ACIDS ENCODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: P3430R1C104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Homo Sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                  172
                                                                                                                                                     132
                                                                            182
                                                                                                                                                                                     123 LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 132 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                           74 SQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                 20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR------DLPG
                                                                                                                                                                                                                                                                                                                                        14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74 SQRYDQGGNFTS---EMITHNVEPSDSGNIRCSLQNSRLHG-SAYLTV-----QVMGE 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20 AGPSPHFLQQPEDLVVLLGEEARLPCALGAYWGLVQWTKSGLALGGQR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 SGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRPMEPIITNDRFT 73
                                                                                                            PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                        WSRYWISGNAANGQHDLHIRPVELEDEASYECQATQAGLRSRPAQLHVLVPPEAPQVLGG 131
                                                                          PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT
                                                                                                                                                 ---PSVSLVA--GVPANLTCRSRGDARPT----PELLWFRDGVLLDGATFHQTLLKEGT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PGSVESTLTLTPFSHDDGATFVCRARSQALPTGRDTAITLSLQYPPEVT 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDT 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LFIPSVNLVVAENEPCEVTC-----LPSHWTWLPDISW-ELGLLVSHSSYY--FVPE-- 171
                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/10176758
                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US20030008353A1
                                                                                                                                                                                                                                                                                                                                                                                               6.1%; Score 128; DB 9
23.1%; Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23.1%;
                                                                                                                                                                                                                                                                                                                                                                              41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 0.095;
                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9; Length 708;
                                                                                                                                                                                                                                                                                                                                                                              95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95;
                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                              40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --DLPG
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                       171
                                                                                                                                                                                                                                                                                                   71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    71
                                                                                                                                                                                                                                                                                                                                                                              11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
```

Sequence

584, Application US/10175737

35;

Gaps

2;

--- 2307

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 2
US-10-184-644-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Homo Sapien US-10-184-644-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                          Sequence 559, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 559
LENGTH: 2473
    SEQ ID NO 559
                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 559,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                      Prior Application removed - See File Wrapper or Palm NUMBER OF SEQ ID NOS: 612
                                                        CURRENT APPLICATION NUMBER: US/10/184,634
CURRENT FILING DATE: 2002-06-28
                                                                                            APPLICANT: Zhang Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: ACIDS ENCODING THE SAME
FILE REFERENCE: P3430R1C217
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prior Application remo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/184,644
CURRENT FILING DATE: 2002-06-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Baker, Kevin P.
APPLICANT: Chen, Jian
APPLICANT: Desnoyers, Luc
APPLICANT: Goddard, Audre
                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES TITLE OF INVENTION: ACIDS ENCODING THE SAME FILE REFERENCE: P3430R1C227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              243 WGKVGLGLAGTMLLTPTCTLTIRCCCCR-RRCCGCNCCCRCCFCC 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         325 QKTTDTASLPPKSCESSDPEQRNSSCGPP 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.6%;
Similarity 29.5%;
                    SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----ATTCCTCATCGCCCACCCCACCCCCCCCCCCACCACC 2344
                                                                                                                                                                          Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                  Gurney, Austin L.
                                                                                                                                                                                                                                                                      Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                Smith, Victoria
                                                                                                                                                                                                                                  Pan, James
                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                Chen, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K. Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith, Victoria
                                                                                                                                                                                                                                                                                                                                                                                          Application US/10184634
o. US20030068684A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/10184644

o. US20030044930A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        removed -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -QSEEPEAGESSTGGP 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  See File Wrapper or Palm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 138.5; DB Pred. No. 0.069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -QRRGEERKAPENQEEEEERAELN-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 2473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                    В
                                                                      Qy
                                                                                                                Вb
                                                                                                                                                  Ş
                                                                                                                                                                                          뫄
                                                                                                                                                                                                                            QУ
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
US-10-016-283-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo Sapien US-10-184-634-559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-016-283-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Valenzuela et al.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 33, Application US/10016283 Patent No. US20020164702A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/016,283
CURRENT FILING DATE: 2001-11-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 36 SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1996-12-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: US/09/077,955A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: NOVEL TYROSINE KINASE RECEPTORS AND LIGANDS FILE REFERENCE: REG195-B-PCT-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 869
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 2473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2274 AATTGAAGTTTCAATTAAAATTTAATATGTTTCC-----
                                    430
369
                                                                          313
                                                                                                                  374
                                                                                                                                                      268
                                                                                                                                                                                          321
                                                                                                                                                                                                                                224
                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                                                  209
                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                                                                                                                                          159 -SPLRENSRIAVLE------SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        113 GALQVKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243 WGKVGLGLAGTMLLTPTCTLTIRCCCCR-RRCCGCNCCCRCCFCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183 ALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPT 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
OASENLA
                                      SVPECSKLPSMHWDPTACARLP-----HLDYNKENLKTFPP--MTSSKPSVDIPNLPSSS 482
                                                                                                                LCNHIFQECSPGVVPTPIPICREYCLAVKELFCAKE----WLVMEEKTHRGLYRSEMHLL 429
                                                                                                                                                                                          RGEVCNAVLAKDALVFLNTSYADPEEAQELLVHTAWNEL------KVVSPVCRPAAEAL 373
                                                                                                                                                                                                                                                                    RVIDSRLQLFITKP---GLYTCIATNKHGEKFSTAKAAATISIAEWSKPQKDNKGYCAQY 320
                                                                                                                                                                                                                                                                                                        SDLQSAVSILALTPQSNGTLTCVAT----WKSLKARKSATVNLTVIRCPQDTGGG-----
                                                                                                                                                                                                                                                                                                                                                EVFARILRAPESHNVTFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKD 263
                                                                                                                                                                                                                                                                                                                                                                                      ELFIPSVNLVVAENEP------CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                        SGNENSGYNSDEQKTTDTASLPPKSCESSDPEQRNSSCGPPHQRADQRP----PRPASHP 368
                                                                                                                                                  CCRRRCCGCN------CCCRCC-----FCCRRKRGFRIQFQKKSEKEKTNKETETE 312
                                                                                                                                                                                                                              ----INIPGVLSSLPSLGFSL----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -ATTCCTCATCGCCCACCCCACCCCGCCCCCCACCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6.6%;
29.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.3%; Score 132.5; DB 20.8%; Pred. No. 0.056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT/US96/20696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 138.5; DB Pred. No. 0.069; 3; Mismatches
                                                                                                                                                                                                                              ----PTWGKVGLGLAGTMLLTPTCTLTIRCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                178;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 869;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           286
```

Gaps

20;

Run

Sequence Sequence

Sequence Sequence

Sequence Sequence Sequence

Sequence

```
Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the score greater that and is derived by
        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq
                                                                                                                                                                                                                                                                                                                                                                                            No. is the number of results predicted by chance to l
greater than or equal to the score of the result bein
derived by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length:
                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-729-264-4
2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301932 seqs, 80129803 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     April 29, 2003, 11:05:56; Search time 19.0659 Seconds
                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Published_Applications_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MVAGAMENRDPPGSGSGNEV......HPQASFNLASPEKVSNTTVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                             . 6
. 3
. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000000000
      DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapext 0.
                                                                    10
9
9
9
   US-08-755-235-4
US-10-184-634-559
US-10-1184-634-559
US-10-1184-634-559
US-10-1174-590-584
US-10-1774-590-584
US-10-175-737-584
US-10-175-738-584
US-10-175-738-584
US-10-175-738-584
US-10-175-738-584
US-10-176-482-584
US-10-176-93-584
US-10-180-552-584
US-10-180-552-584
US-10-180-552-584
US-10-173-700-584
US-10-174-572-584
US-10-174-572-584
                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (without 1622.277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alignments)
Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                          chance to have a result being printed,
Sequence 4, Appli
Sequence 559, App
Sequence 559, App
Sequence 33, Appl
Sequence 584, App
                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                         Qy
                                                                                                                                                                         В
                                                                                                                                                                                                        δÕ
                                                                                                                                                                                                                                                                   ν
                                                                                                              밁
                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Human
US-08-755-235-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
US-08-755-235-4
                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 4
LENGTH: 40
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/08755235
Publication No. US20030059423A1
GENERAL INFORMATION:
APPLICANT: Stern, David M.
APPLICANT: Schmidt, Ann Marie
APPLICANT: Wu, Jun Marie
APPLICANT: Wu, Jun Marie
APPLICANT: Wu, Jun Marie
                                                                                                                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/08/755,235
CURRENT FILING DATE: 1996-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162 KPLVPNEKGVSVKEQTRRHPETGLFTLQSELM----VTPARGGDPRPTFSCSFSPGLPRHR 218
                      267
                                                    322
                                                                                                                                              155
                                                                                                                                                                                                                                                                   64 EPIITNDRETS-----QRYDQGGNET---SEMIIHNVEPSDSGNIR-----CSLQNSRLHGS
                                                                                                                                                                                                                                                                                                   Local Similarity 23.7 les 78; Conservative
                    CCCRRRCCGCNCCCRCCFCCRRKRGFRIQFQKKSEKEKT - - NKETETESGNENSGYNSDE 324
                                                                                                                                                                           ALRTAPIQPRVWEPVPLEEVQLVV---EPEGGAVAPGGTVTLTCEVPAQPS-----PQIH
                                                                                                                                                                                                        AYLTVQVMGELFIP----SVNLVVAENEP-----
                                                    IE-PGEEG----
                                                                                IRCPODTGGGINIPGVLSSLPSLGFSLPTWGKVGLGLAGTMLLT-----PTCTLTIRC
                                                                                                                WMKD------GVPLPLPPSPVLILPEIGPQDQGTYSCVATHSSHGPQESRAVVSISI
                                                                                                                                WELGILVSHSSYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKS-ATVNLTV 213
                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                  6.7%; Score 140; DB 1
23.7%; Pred. No. 0.006;
tive 34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-174-582-584
US-10-175-739-584
US-10-175-739-584
US-10-175-740-584
US-10-175-48-584
US-10-176-48-58-64
US-10-176-985-584
US-10-176-997-584
US-10-176-997-584
US-10-176-993-584
US-10-176-993-584
US-10-176-993-584
US-10-176-993-584
US-10-176-993-584
US-10-176-993-584
US-10-176-595-584
US-10-176-595-584
US-10-176-58-584
US-10-173-65-584
US-10-174-58-584
US-10-174-58-584
US-10-174-58-584
US-10-174-58-584
US-10-174-58-584
US-10-176-487-584
US-10-176-487-584
US-10-176-487-584
US-10-176-487-584
US-10-176-487-584
US-10-176-487-584
US-10-176-487-584
                                                    -PTAGSVGGSGLGTLALALGILGGLGTAALLIGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
```

OF DIABETES

Result No.

93;

Indels 124;

Gaps

16;

CEVTCLPSHWTWLPDIS

Length 405;

•			
		·	
	•		
	· · · · · · · · · · · · · · · · · · ·		
			··

B tatus predicted F;16780,16976,17579,17602,17667,17681,17845,17899,18121,18188,18209,18336,18670,18680,10 ,21900,21935,22295,22495,22627,22897,23024,23318,23883,24012,24177,24290,24447,24642,240 F;26171,26178,26184,26190/Binding site: phosphate (Ser) (covalent) #status experimental C;Superfamily: titin; fibronectin type III repeat homology; immunoglobulin homology; pro C;Keywords: alternative splicing; calmodulin binding; cardiac muscle; duplication; glycq γQ 밁 Qy Š В structural protein
F;24752-25008/Domain: protein kinase homology <KIN>
F;24752-25008/Domain: protein kinase homology <KIN>
F;84,177,905,2276,2378,2459,2481,2563,2669,2763,2896,3088,3179,3384,3432,3628,3772,4068
F;84,177,905,2276,2378,2459,2481,2563,2669,2763,2896,3088,3179,3384,3432,3628,3772,4068
98,11066,11488,11515,11635,11949,12170,12478,12526,12645,12875,13001,13036,13295,13540,. Search completed: April 28, 2003, 21:09:09
Job time : 40.0659 secs Qy ₽ Query Match 5.5%; Score 114.5; DB 1; Length 26926; Best Local Similarity 22.1%; Pred. No. 45; Matches 62; Conservative 31; Mismatches 87; Indels 101; 16477 VKWGKVDGEIRDAAIIDVT-----16422 AGVGEHADVPGPIIVEEKLEAPDIDLDLELRKIINIRAGGSLRLFVPIKGRP-----TPE 16476 16631 -AEVPOPPGKITVDDV-----TRNSVSLSWTK---PEHDGG 16662 16571 YIVEKREATRKSYAAVVTNCHKNSWKIDQLQEGCSYYFRVTAENEYGIGLPAQTADPIKV 16630 16517 TLENSSGTKSAFVTVRVL-DTPSPPVNLKVTEITKDSVSI----TWEPPLLDGGSKIKN 16570 154 ------VPEPSDLQSAVSI 181 103 SLONSRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDI----- 153 182 LALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGG 43 QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC 102 3 AGAMENRDPPGSGSGNEVIEGPQ------NARV-----LKGSQARFNCTVS 42 ----SSFTS-LVLDNVNRYDSGKYTL 16516 87; Indels 101; Gaps 12;

```
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 05-Nov-1999
C;Accession: I49583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
RESULT
I38344
titin,
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Title: Organization of the murine Cd22 locus. Mapping A; Reference number: I49583; MUID:93315834; PMID:8100843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                  γ
                                                                                                                                                                           밁
                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-862 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R; Law, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        differentiation antigen - mouse
                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Cross-references: GB:L16928; NID:g348965; PIDN:AAA02562.1; PID:g348966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: I49583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunol. 151, 175-187, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             204
                                                                                                                                                                                                                                                                                                                                 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472 NPQGSGS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      145 TPEVKWGKVDGDIRDAAIIDVTSSFTS-LVLDNVNRYDSGKYTLTLENSSGTKSAFVTVR 203
                                                                                                                                                                                                                                                       707
                                                                                                                                                                                                                                                                                                                                                                                                              628 TLSCESDANPPISQYTW-
                                                                                                                                                                                                                                                                                                                                                                                                                                                139 EVTCLP-----SHWTWLPDISWELGLLVSHSSYYFVPEPSDLQSAVSILALTP---QSN 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520 PRDVKVLKVSPASEIRAGQRVLLQCDFAESNPAEVRFFWKKNGSLVQEGRYLSFGSVSPE 579
                                                                                                  799
                                                                                                                                                                                                                                                                                                                                                                        190 GTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIPGVLSSLPSLGFSLPTWGKVGLG
                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96 DSGNIRCSLQNSRLHGSAYLTVQVMGELFIPSVNLV-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52 LSDMVVLSVRPMEPIITNDRFTSQ-------RYDQGGNFTSE---MIIHNVEPS 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 DPPGSGSGNEVIEGPQNARVLKGSQARFN-----
    cardiac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----TRNSVSLSWTK---PEHDGG 333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VL-DTPSPPVNLKVTEITKDSVSI-----TWEPPLLDGGSKIKNYIVEKREATRKSYAAV 257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WKSLKARKSATVNLTVIRCPQDTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VTNCHKNSWKIDQLQEGCSYYF-RVTAENEYGIGLAARTADPIKVAEVPQPPGKITVDDV 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----SWELGLLVSHSSYYFVPEPSDLQSAVSILALT-----PQSNGTLTCVAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDI----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSGNYNCMVNNS------IGETLSQAWNLQVLYAPRRLRVSISPGDHVMEGKKA 627
                                                                                                  QAPPPNNSDSVTYSVIQKRPMGDYENVNPSC 829
                                                                                                                                                                             NSSGQSFFVRNKKARRTPLSEGPQSQGCYNPAMDDTVSYAILRFPESDMHNAGDAGTPAT
                                                                                                                                                                                                                                                         LGFCLTI - - - CILAI - -
                                                                                                                                                                                                                                                                                           LAGIMLLIPICILIIRCCCCRRRCCGCNCCCRCCFCCRRKRGFRIQ-----
                                                                                                                                                                                                                                                                                                                                 GSYRCKGT-NGIGIGESPPSTLTVYYSPETIG-----
                                                                                                                                                                                                                 KSE----KEKTNKETETESGNENSG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
    muscle [validated] -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----VLKPGVLRIQKVTWDSMPVSCAACNHKCSWALPVILNVHYA 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5.5%;
                                                                                                                                      -SDPEORNSSC 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 114.5;
Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              -FDSSGQDLHSSGQKLRLEPLEVQHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----CTVSQGWKL----IMWA 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126;
                                                                                                                                                                                                                                                       -WGMKIQKKWKQNRSQQGLQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                 -YNSDEQKTTDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chromosome 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --VAENEPC 138
                                                                                                                                                                                                                                                                                                                                 -KRVALG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                       738
                                                                                                                                                                                                                                                                                             298
                                                                                                                                                                                                                                                                                                                                                                        249
                                                                                                                                                                                                                                                                                                                                                                                                              669
                                                                                                                                                                                                                                                                                                                                 706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           characteriz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N; Contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: mRNA
A; Residues: 1-26926 <
                                                                                                                                                                               R; Pfuhl,
      A; Description: structural protein forming filaments in
                                                                                                C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: S20899
                                                                                                                                                                               M.; Pastore, A
```

```
A;Cross-references: EMBL:X90568; NID:g1017424; PID:g1017425
R;Musco, G.; Tziatzios, C.; Schuck, P.; Pastore, A.
Blochemistry 34, 553-561, 1995
A;Title: Dissecting titin into its structural motifs: identification
A;Reference number: 138345; MUID:95119041; PMID:7819249
A;Accession: 138345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Towards a molecular understanding of titin. A;Reference number: S20897; MUID:92258380; PMID:1582406 A;Accession: S20898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Note: conformation and properties are reported R;Labeit, S.; Gautel, M.; Lakey, A.; Trinick, J. EMBO J. 11, 1711-1716, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Titins: giant proteins in charge of muscle ultrastructure and elasticity. A;Reference number: A57430; MUID:96026330; PMID:7569978 A;Accession: I38344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Homo sapiens (man)
C;Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 15-Sep-2000
C;Accession: 138344; 138345; S20898; S20897; S20899; S63665; S37393
                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 26831-26926 <GAU>
R; Improta, S; Politou, A.S.; Pastore, A.
submitted to the Brookhaven Protein Data Bank, February 1996
A; Reference number: A66736; PDB:1TIT
A; Contents: annotation; conformation by (1)H-NMR, residues 5253-5341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Title: Phosphorylation of KSP motifs in the C-terminal region of titin in different A;Reference number: S37393; MUID:94008990; PMID:8404852 A;Accession: S37393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 'P',22278-24431,'R',22433-22448,'G',22450-22453,'Q',22455-22480,'TR',2248
A; Cross-references: EMBL:x64697; NID:g37190; PIDN:CAAA45938.1; PID:g37195
A; Clarer, B.; Olivieri, N.; Witt, C.C.; Herrmann, B.G.; Labeit, S.
J. Mol. Biol. 256, 556-563, 1996
J. Mol. Biol. 256, 556-563, 1996
A; Title: Genomic organization of M line titin and its tissue-specific expression in t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA
A;Residues: 15330-16382,'S',16384-16756,'F',16758-16860 <LAB3>
A;Cross-references: EMBL:X64699; NID:g37190; PIDN:CAA45940.1; PID:g37191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 13597-14200, 'I',14202-14696 <LAB2>
A;Cross-references: EMBL:X64698; NID:g37192; PIDN:CAA45939.1; PID:g37193
A;Accession: S20897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:X83270; NID:g602579; PIDN:CAA58243.1; PID:g602580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Labeit, S.; Kolmerer, B. Science 270, 293-296, 1995
                                                                                                                                                                                                                                                                  submitted to the Brookhaven Protein Data Bank, August 1996 A; Reference number: A66201; PDB:1NCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Gautel, M.; Leonard, K.; Labeit, EMBO J. 12, 3827-3834, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Reference number: S63665; MUID:96177761; PMID:8604138
A;Accession: S63665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 1977-2014 < MUS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: nucleic acid sequence not shown; translation not shown; translated from GB/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N; Alternate names: connectin
                                                           A;Cross-references: GDB:127867; OMIM:188840
A;Map position: 2q31-2q32
                                                                                                                                                                                                                            A; Contents: annotation; conformation by (1)H-NMR, residues 'S', 26059-26155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Residues: 26729-26825 <KOL>
A; Cross-references: EMBL: X92412; NID: g1236761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Status: nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             serine/threonine-specific protein kinase (EC 2.7.1.-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic
striated muscle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            an alpha-heli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         correspondin
```

```
밁
                           Ş
                                                                                                               Qy
                                                                                                                                                              DЬ
                                                                                                                                                                                                      Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C;Superfamily: Torpedo ror-related receptor; immunoglobulin C;Keywords: ATP; glycoprotein; kringle; phosphotransferase; F;44-103/Domain: immunoglobulin homology <IMl>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ror-related receptor RTK - Pacific electric ray
N;Contains: protein-tyrosine kinase (EC 2.7.1.112)
C;Species: Torpedo californica (Pacific electric ray)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 19-May-2000
C;Accession: A47299
                                                                                                                                                                                                                                                                                                                                               দ্ৰাদ্
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:L11311; NID:g290857; PIDN:AAA49285.1; PID:g290858 A;Experimental source: electric organ A;Note: sequence extracted from NCBI backbone (NCBIN:128724, NCBIP:128726)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Jennings, C.G.; Dyer, S.M.; Burden, S.J.
Proc. Natl. Acad. Sqi. U.S.A. 90, 2899, 1993
A;Title: Muscle-specific trk-related receptor with a kringle
A;Reference number: A47299; MUID:93219391; PMID:8385349
                                                                                                                                                                                                                                                                                                                                                                                                       F;572-588/Domain: transmembrane #status predicted <TMN>
                                                                                                                                                                                                                                                                                                                                                                                                                              F;464-542/Domain: kringle homology <KR3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;137-195/Domain: immunoglobulin homology <IM2>F;229-287/Domain: immunoglobulin homology <IM3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-946 < JEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: A47299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F;704-725/Domain: transmembrane #status predicted <TMM>
F;726-1070/Domain: intracellular #status predicted <INC>
F;794-1065/Domain: protein kinase homology <KIN>
F;116,175,184,214,268,283,405,463,567,646/Binding site: carbohydrate (Asn) (covalent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Keywords: cell adhesion; extracellular protein; glycoprotein; phosphotransferase; F;1-30/Domain: signal sequence #status predicted <SIG>F;31-1070/Product: protein-tyrosine kinase 7 #status predicted <MAT>F;31-703/Domain: extracellular #status predicted <EXC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
                                                                                                                                                                                                                                                                                                                                      58-666/Region: protein kinase ATP-binding 225,340,477,544/Binding site: carbohydrate
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                             650-940/Domain: protein kinase homology <KIN>658-666/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              388 VYTCHAA--NLAGQRRQDVNITVATVPSWLKKPQDSQLEEGKPGYLDCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   191 TLTCVATWKSLKARKSATVNLTV-----IRCPQDTGGGINIPGVLSSL 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            134 ENEPCEVTCLPSHWTWLPDISWE-LGL-LVSHSSYYFVPEPSDLQSAVSILALTPQSN-G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283 ----NGSLLLTQVRPRNAGIYRCIGQGQRGPPIILEATLHLAEIEDMPLFEPRVFTAGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              227 VVLAPQDVVVARYEEAMFHCQFSAQPPPSLQWLFEDETPITNRSRPPHLRRATVFA---- 282
                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  79 QGGNFTSEMIIHNVEPSDSGNIRCSLQNSR-----LHGSAYLTVQVMGELFIPSVNLVVA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 VIEGPQNARVLKGSQARFNCTVS-QGWKLIMWALSDMVVLSVRPMEPIITNDRFTSQRYD 78
                                                                                                                                                                                                   4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNC-TVSQGWKLIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                             MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNS---RLHGSAYLTVQV 119
                                                                                                                                                         GALQVKMKP-----KIIRPPTDVRALLGSKVVLPCSTMGNPKPAISWFKDETALKNDQP 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EE---RVTCLPPKGLPEPSVWWEHAGVRLPTHGRVY-
                                                                                                                                                                                                                                                       62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58;
                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                   ----ESGN-----LRIRNVQLEDAGKYRCLARNSLGFEYSRSAALEVQV 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.7%;
25.3%;
                                                                                                                                                                                                                                                                            23.7%;
                                                                                                                                                                                                                                                                                                 5.5%;
                                                                                                                                                                                                                                                       38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32;
                                                                                                                                                                                                                                                                       Score 115.5;
Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 119; DB Pred. No. 0.66;
                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                        (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                       105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1070;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ~QKGHELVLANIAESDAG
                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transmembrane protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homology; kringle homology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             domain
                                                                                                                                                                                                                                                  57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           defines
                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                      predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             distinct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tran
                  QУ
                                                                   밁
                                                                                                           QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S20900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T18975
                       63
```

```
R;Labeit, S.
EMBO J. 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           titin - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                                                                                                                                                                                       C;Superfamily: titin; fibronectin type III repeat homology;
C;Keywords: muscle
                                                                                                                                                                                                                                                                                                                                               A;Reference number: S20897; MUID:92258380; A;Accession: S20900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R; McMurray, A. submitted to the EMBL Data Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein C06A1.6 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T18975
                                                                                                                                                                                                                                 A; Note: the nucleotide sequence was submitted to the EMBL Data Library,
                                                                                                                                                                                                                                                    A; Cross-references: EMBL: X64700; NID: g54807; PIDN: CAA45941.1; PID: g54808
                                                                                                                                                                                                                                                                               A; Residues: 1-531 <LAB>
                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                       A; Status: nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                       A; Title: Towards a molecular understanding of titin
                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Accession: S20900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Introns: 22/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Gene: CESP:C06A1.6
A; Map position: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:Z49886; PA;Experimental source: clone C06A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-152 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: Z19054
A; Accession: T18975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                 Matches
                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      315
       93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       233 LPSLGFSLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCN-----CCCRCCFCCR 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180 SILALTPQSNGTLTCVATWKSLKARKSATVNLTVIR-----CPQDTGGGINIPGVLSS 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               214 SARIVKAPTSQNVSYGSEVILQCKATGFP-----IPTIKWLENGRAVPKGSIQNRIKGEV 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16
                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity es 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                 S.; Gautel, M.; Lakey, A.; Trinick, J.
1, 1711-1716, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TIVSISQVESGVLPVSTTEISIISSETSIIGSSRVKRNGGCCGCCGCGGGG------
AGVGEHADVPGPVMVEEKLEAPD----IDLDLELRKVINIRAGGSLRLF-----VPIKGRP 144
                                               AGAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWKLIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSLPSLGFSLPTWGKVGLGLAG 252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----DLGYCSTYRGEVCQGLLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MESRLRVYVTRP---SLFTCLTTNKHNEGSTTAKATATLDIKEWRLYKG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LQSAVSILALTPQSNGTLTCVATWK----SLKARKSATVNLTVIRCPQDTGGGINIPGVL
                                                                                            62;
                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.5%;
24.2%;
                                                                                                                  5.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -GGCGCCCRPRC----CCCCRPKCC-CTCCRTCCCTRCCTCCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                            36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIDN:CAA90055.1; GSPDB:GN00020; CESP:C06A1.6
                                                                                                                  Score 114.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 114.5; D
Pred. No. 0.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    June 1995
                                                                                       ed. No. 0.67;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                    PMID:1582406
                                                                                                                                     DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32;
                                                                                            98;
                                                                                            Indels
                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 152;
                                                                                                                                                                                                       immunoglobulin homology;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43;
                                                                                            69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-Jun-1999
                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
                                                                                                                                                                                                                               February 1992
                                                                                          11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

MEPI----ITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAYLTVQ 118

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
Š
                                            밁
                                                                              δÃ
                                                                                                                             밁
                                                                                                                                                                 Ŷ
                                                                                                                                                                                                                                                                                      MOLECULE TYPE: protein PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US94-05277-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application PC/TUS9405277
GENERAL INFORMATION:
APPLICANT: Bruskin, Arthur
                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 202.508.9299
TELEX: 197430 BBMB UT
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 1447 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202.508.9100
TELEPAX: 202.508.9299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Vogelstein, Bert
APPLICANT: Zabrecky, James R.
TITLE OF INVENTION: Antibodies Specific for DCC Gene Product
NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    427 -VLPSAP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 GVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168 FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIP 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               319 ISASAELTVLVPPWFLNHPSNLYAYESMDIEFECTVSGKP-VPTVNWMKNGDVVIPSDYF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                274 LRGEEVI---
                                                                                                                           215 RNPASSRTGNEAEVRILSDPGLHRQLYFLQRPSNVVAIEGKDAVLECCVS-GYPPPSFTW 273
    109 LHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTWLPDISW-ELGLLVSHSSYY 167
                                              274 LRGEEVI----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                  51 ALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108
                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Kagan, Sarah A. REGISTRATION NUMBER: 32,141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/US94/05277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS------
                                                                                                                                                               RDPPGSGSGNEV-------IEGPQNARVLKGSQARFNCTVSQGW--KLIMW 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: Banner, Birch, McKie & Beckett 1001 G Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                           1447 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Johnson, Karen
Kinzler, Kenneth W.
                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jarosz, David E.
                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                               6.5%;
25.1%;
                                            ----QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNEN 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---QLRSKKYSLLGG--SNLLISNVTDDDSGMYTCVVTYKNEN 318
                                                                                                                                                                                                         34;
                                                                                                                                                                                                                            Score 136; DB 5; Length 1447; Pred. No. 0.0018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01107.42709
                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version #1.25
                                                                                                                                                                                                           101;
                                                                                                                                                                                                         Indels
                                                                                                                                                                                                           50;
                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 377
                                                                                                                                                                                                         10;
```

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                   γ
                                                         DЪ
                                                                                          Qy
                                                                                                                                  Вb
                                                                                                                                                                      QΥ
                                                                                                                                                                                                             B
                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-374-834-16
                                                                                                                                                                                                                                                                                                                                                                   US-08-374-834-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 16, Application US/08374834 Patent No. 5656473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No.
                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (914) 345-7721 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08
FILING DATE: 21-JUL-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: RETELECOMMUNICATION INFORMATION: TELEPHONE: (914) 345-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/374,834
FILING DATE: 19-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: unknown MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319 ISASAELTVLVPPWFLNHPSNLYAYESMDIEFECTVSGKP-VPTVNWMKNGDVVIPSDYF
122
                                                                                                                                    159
                                                                                                                                                                                                             113 GALQYKMKP-----KITRPPINVKIIEGLKAVLPCTTMGNPKPSVSWIKGD------ 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          427 -VLPSAP 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               228 GVLSSLP 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 378 QIVGGSNLR----ILGVVKSDEGFYQCVAENEAGNAQTSAQLIVPKPAIPSSS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168 FVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGGGINIP 227
                                                                                                                                                                      63 MEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQNSRLHGSAY-LTVQVMG 121
                                                                                                                                                                                                                                                                                        Local Similarity
les 89; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Cobert, Robert J
REGISTRATION NUMBER: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Regeneron Pharmaceuticals, Inc
STREET: 777 Old Saw Mill River Road
                                                                                                                                                                                                                                                 4 GAMENRDPPGSGSGNEVIEGPQNARVLKGSQARFNCTVSQGWK-LIMWALSDMVVLSVRP 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                         EVFARILRAPESHNVTFGSFVTLHCTATGIP-----VPTITWIENGNAVSSGSIQESVKD 263
                                                                           ELFIPSVNLVVAENEP--------CEVTCLPSHWTWLPDISW-ELGLLVSHSSYYFVPEP 172
                                                                                                                                    -SPLRENSRIAVLE----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : Tarrytown
E: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                869 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                      6.3%; score 132.5; DB ilarity 20.8%; Pred. No. 0.0018; Conservative 55; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Valenzuela, et al.
VENTION: NOVEL TYROSINE KINASE RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 08/095,658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36,108
                                                                                                                                    -SGSLRIHNVQKEDAGQYRCVAKNSL--GTAYSKVVKLEV 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REG 190A
                                                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                          178;
                                                                                                                                                                                                                                                                                                                              Length 869;
                                                                                                                                                                                                                                                                                          Indels 105;
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  377
                       223
                                                                                                                                                                                                                                                                                          20;
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0% Maximum Match 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   score greater than or equal to the score of the result being and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                  132.5
132.5
132.5
132.5
128.5
123.5
123.5
123.5
123.5
123.5
123.5
123.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
121.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           132.
132.
132.
132.
128.
123.
123.
122.
122.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Issued_Patents_AA:*
1: /cgn2_6/ptodata/1,
2: /cgn2_6/ptodata/1,
3: /cgn2_6/ptodata/1,
4: /cgn2_6/ptodata/1,
5: /cgn2_6/ptodata/1,
6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-729-264-4
2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    April 28, 2003, 18:14:43; Search time 14.0485 Seconds (without alignments) 808.430 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000000000
                                US-08-644-271-29
US-09-077-955-33
US-09-651-200-2
US-09-651-200-2
US-09-651-200-24
US-09-651-200-24
US-09-651-200-24
US-09-651-200-24
US-09-651-200-24
US-09-651-200-24
US-09-64-271-1
US-08-633-148-4
US-09-651-200-24
PCT-US95-08493-15
PCT-US95-08493-12
PCT-US95-08493-13
US-09-651-200-20
US-09-651-200-20
US-09-659-984A-1
US-08-659-984A-1
US-08-659-984A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-041-886-25
PCT-US94-05277-2
US-08-374-834-16
Sequence 6, Appli
Sequence 11, Appli
Sequence 15, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 15, Appli
Sequence 15, Appli
Sequence 21, Appli
Sequence 21, Appli
Sequence 20, Appli
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 25, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 29, Appli
Sequence 33, Appli
Sequence 2, Appli
Sequence 4, Appli
Sequence 6, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
```

4.0	4.	4	4	4	4 (33	32	ω	30	<u>ب</u>	34	ω	ω	ω	3(2	2
				102.5							1 104						10
5 4	5 4	5 4	5	5	5	5 4	5	5	5	4 5	4 5	5	4 5	5	6	7 5	5
.9	٠,	.9	9	.9	•	.9			.0	.0	.0	.0	.0	.0	L	<u></u>	L
911	911	068	890	890	068	879	365	690	690	319	319	319	319	285	108	1297	362
N	ш	ω	ω	w	-	ب	4	4	4	4	4	4	ب	ω	س	4	_
US-08-441-104A-1	US-08-286-305A-1	US-08-445-461-2	US-08-447-314-2	US-08-170-558-2	US-08-445-640-2	US-08-554-612C-1	US-08-928-383B-26	US-09-553-132-2	US-08-935-433-2	US-09-254-465A-6	US-09-336-536-67	US-09-068-051A-22	US-08-597-495B-22	US-08-482-085B-20	US-07-906-349A-6	US-09-540-245A-17	US-08-415-751-6
Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
1,	۲	'n	2	2	Ņ	1,	26,	2	2	6,	67,	22,	22,	20,	6	17,	,
Appli	Appli	Appli	Appli	Appli	Appli	Appli	Appl	Appli	Appli	Appli	Appl	Appl	Appl	Appl	Appli	Appl	Appli

ALIGNMENTS

RESULT 1 US-09-041-886-25 CLASSIFICATION: ATTORNEY/AGENT INFORMATION: NAME: Campbell, Cathryn A. REGISTRATION NUMBER: 31,815 REFERENCE/DOCKET NUMBER: P-LJ TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 535-9001 TELEPHONE: (619) 535-9049 INFORMATION FOR SEQ ID NO: 25: Sequence 25, Application US/09041886 Patent No. 6235872 GENERAL INFORMATION: TYPE: amino acid TOPOLOGY: linear MOLECULE TYPE: prot SEQUENCE CHARACTERISTICS: LENGTH: 1447 amino acids TYPE: amino acid SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/041,886 COMPUTER READABLE FORM: MEDLIM TYPE: Floppy disk COMPUTER: LBM PC compatible COPERATING SYSTEM: PC-DOS/MS-DOS CORRESPONDENCE ADDRESS: ADDRESSEE: Campbell & Flores LLP STREET: 4370 La Jolla Village Dr: APPLICANT: Bredesen, Dale E. APPLICANT: Rabizadeh, Sharroz TITLE OF INVENTION: Proapoptotic Peptides, De TITLE OF INVENTION: Polypeptides and Methods NUMBER OF SEQUENCES: FILING DATE: COUNTRY: CITY: San Diego 92122 California: United States protein P-LJ 2626 Drive, Dependence ds of Use

QY

215

US-09-041-886-25

Query Match Best Local S Matches 62

Similarity

6.5%; Score 136; DB 4; I 25.1%; Pred. No. 0.0018; live 34; Mismatches 101;

Length 1447;

Gaps

10;

Conservative

Qy Db

51 ALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRC--SLQNSR 108

```
밁
                              δô
                                                               밁
                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
US-08-145-617-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                             US-08-145-617-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/08145617 Patent No. 5766847
                                                                                                                               Matches
                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                         TELEX: 248345
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-241-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Jackle, Herbert APPLICANT: Tautz, Diethard
                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: PROCESS FOR ANALYZING LENGTH TITLE OF INVENTION: POLYMORPHISMS IN DNA REGIONS
 154
                               911 TGCTGCTGCCGTTGTTTCTGCTG 936
                                                                              851 CCGACGTGTACTACAATACGCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAAC 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            933 GCTG 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      873 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCCAACTGCTGCTGCCGGTTGTTTCT 932
                                                                                                                                              Local
                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                           TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 07/681,494 FILING DATE: 10-JUN-1991
                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: DE P
FILING DATE: 11-OCT-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                         TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Svensson, Leonard R
REGISTRATION NUMBER: 30,3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                             LENGTH:
                                                            CCGAACTCCAGGCCTCCGAGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGT 155
TGCTGCTGATGTTGCTGCTGTTG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     h 3.4%;
Similarity 78.1%;
                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Falls Church
                                                                                                                                                                                                                                                         nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: BIRCH, STEWART, KOLASCH
                                                                                                                                                                                                                                                                                                                                         703-241-2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 United States of America
                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                                                                                                                          single
                                                                                                                                           3.3%; Score 41.2; DB 1; 67.4%; Pred. No. 0.027;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DE P3834636.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/145,617
                                                                                                                                                                                                                                                                                                                                                                                                         30,330
                                                                                                                                                                                                                                                                                                           ر.
                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 41.6; DB / Pred. No. 0.015;
                                                                                                                                                                                                                                                                                                                                                                                          147-122PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KOLASCH & BIRCH
Street, P.O. Box 747
                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                             28;
                                                                                                                                                        Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                           Indels
                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
γQ
                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 3, Application; Fatent No. 5750652 GENERAL INFORMATION:
RESULT 15
US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
                                                                                                                                                                                                                                                     US-08-185-432-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-185-432-3/c
                                                                                                                                                                                        Matches
                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                             1815
                                                                                                                          1875
                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 3771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Xu, Tian APPLICANT: Matsuno, Kenji
                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                          933 GCTGTAGAAGAAAAAGAGGATTTCGTATT 961
                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
TOPOLOGY: un
                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212) /50 June 12 TELEPHONE: (212) 869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 18 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2: CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                   LOCATION:
                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                             GCTGTTGCTGTCGCGGATGCAGTGGTAAT 1787
                                                                                                                          GCTGCTGCTGCCGCCTGTTGCTGCTGTTGCATCTGCAGCTGTTGCTGCTGTTGCTGCTT 1816
                                                                                                                                                                                        59;
                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                              nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New York
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                           66141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08185432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Busseau, Isabelle
Diederich, Robert J.
                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Artavanis-Tsakonas, Spyridon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PENNIE & EDMONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JAN-1994
                                                                                                                                                                                                                                                                                                                                                 double
                                                                                                                                                                                                   3.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DELTEX PROTEINS, NUCLEIC ACIDS, ANTIBODIES, AND RELATED METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/185,432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18,872
                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7326-006
                                                                                                                                                                                                    Score 41; DB Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Version #1.30
                                                                                                                                                                                                                      DB 1;
                                                                                                                                                                                        30; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND COMPOSITIONS
                                                                                                                                                                                        0;
                                                                                                                                                                                        Gaps
```

Patent No. 5750652 GENERAL INFORMATION:

APPLICANT:
APPLICANT:

Busseau, Isabelle Diederich, Robert J.

Artavanis-Tsakonas, Spyridon

APPLICANT:

Xu, Tian Matsuno, Kenji Sequence 23,

Application US/08185432

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
US-09-780-049-18/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                        US-09-817-180-1
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
US-09-817-180-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-780-049-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT-US92-11107-12
                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Applic
Patent No. 634058
                                    Matches
                                                  Query Match
Best Local Similarity
                                                                                                                                                                         SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18, Application US/09780049 Patent No. 6465250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/817,180
CURRENT FILING DATE: 2001-03-27
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                            TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES TITLE OF INVENTION: THEREOF FILE REFERENCE: CL001183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/780,049
CURRENT FILING DATE: 2001-02-09
NUMBER OF SEQ ID NOS: 96
                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Jacqueline Wyatt TITLE OF INVENTION: ANTISEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24116 TTACTTCCTCACTGTTCCAGAGGCAGAAG 24088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Brett P. Monia APPLICANT: Jacqueline Wya
                                                                                                                                                                                                                                                                                                                                 APPLICANT: GAN, Weiniu et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                       TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24176 TCTTTTGCTAAGGCTGCCACAACAAAGCATCAGAGAATAGGTGGCTTAAACAACAGAAAT 24117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 40000
882 GCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAA 941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    929 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTTGCTAGCTGGTGTTGCTTGTTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         869 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTTGTGCCAACTGCTGCTGCTGTTGTTGT 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88 GCATTTGCTCACGGTTCCAGAAGCTGTAG 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28 TCAGTTTCCTAGGCTGCCATAACAAGCACCATAACCTGGTGGCTTAGAACAATGGAAAG 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTGCTGCTGCCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                         2674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63;
                                    96;
                                                                                                                                                                                         FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                   Application US/09817180
                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RTS-0134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANTISENSE MODULATION OF PROTEIN PHOSPHATASE 2 CATALYTIC SUBUNIT
                                                  3.4%;
                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                  Score 42; DB 4; Length 2674; Pred. No. 0.044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 42.6; DB Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 42.6; DB Pred. No. 0.033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4; Length 40000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 29;
                                  90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                    Indels
                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

```
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
; ORGANISM: p-2093 plasmid US-09-043-303-7
                                                                                                                                                                                                                                                                                                                               US-09-043-303-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-043-303-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-043-303-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 12
LENGTH: 78
                                                                  SEQ ID NO 7
                                                                                                                                                                                                                                                                                           Sequence 7, Application US/09043303 Patent No. 6251589
                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12, Appli
Patent No. 6251589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1998-05-18
EARLIER APPLICATION NUMBER: PCT/JP96/01999
                                                                                 EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                      APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type
TITLE OF INVENTION: Primers Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER APPLICATION NUMBER: PCT/JF96/01999
EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/043,303 CURRENT FILING DATE: 1998-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and TITLE OF INVENTION: Primers Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: TSUJI, Shoji APPLICANT: SANPEI, Kazujiro
                                                                                                                                                                                        FILE REFERENCE: 0760-0241P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 0760-0241P
                                  TYPE: DNA
                                                LENGTH: 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2640 AAAAAA 2645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1062 CAGAAA 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1002 AAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCA 1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       873 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 932
                                                                                                                                                                                                                                                                                                                                                                                                                                     933 GCTG 936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ma
Local 5
50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h 3.4%;
Similarity, 78.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09043303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 41.6; DB 4
Pred. No. 0.0088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-258-442-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-328-809-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/08328809 Patent No. 5705334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                              INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                         ZIF: U2102
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC -DOS/MS-DOS
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                       MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 617-248-7000
                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            758
               IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: STREET: STREET: WA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      929 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    869 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT 928
                                                                                                                                                                                                                                                                                         COMPUTER: IBM FC COMPUTER: COMPUTER: IBM FC COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SOFTWARE: PATENTAL PATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM:
                           ORGANISM:
                                                                                                                                                                                                    NAME: Fenton, Gillian M.
REGISTRATION NUMBER: 36,508
REFERENCE/DOCKET NUMBER: MIT-023 (5473/24)
                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                 NAME: Fenton, Gillia REGISTRATION NUMBER:
                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                          TOPOLOGY:
                                                                                   STRANDEDNESS:
                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTGCTGTTGCTGCAACTGCTGTTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                  nucleic acid
DEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lambda yPt
lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                       53 State Street
                                                                                                                                                           617-248-7100
                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Toney, Jeffrey H. Bruhn, Suzanne L. Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Essigmann, John I
Donahue, Brian A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lippard, Stephen J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1..1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                       linear
                           Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent Administrator, Testa, Hurwitz & Thibeault
                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Recognition Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Uses For DNA Structure-Specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           John M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 42.6;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
PCT-US92-11107-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION:
US-08-328-809-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                            FEATURE:
                                                                                     MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                         IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
 LOCATION:
                                                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                   TOPOLOGY:
                                                                                                                              STRANDEDNESS:
               NAME/KEY:
                                            CLONE:
                                                                       ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
```

```
Sequence 12, Application PC/TUS9211107 GENERAL INFORMATION:
                                                                                                                                                           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3292 base pairs
                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA: APPLICATION NUMBER: PC
                                                                                                                                                                                                                                                                                                                      FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              869 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCTAACTGCTGCTGCTGCTGTTGT 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          758 TGCTGCTGTTGCTGCAACTGCTGTTGTTGTTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               929 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       818 AGATGATGATGTTGTTGAAGGTTGTTGTTGTTGCTACCTGGTGGTTGCTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 0 FILING DATE: 18-JUN-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                      TYPE: NUCLEIC ACID
                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 Similarity 63; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lexington
lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 Militia Drive
                                                                                                                                                                                                                        617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Toney, Jeffrey H. Bruhn, Suzanne L. Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Essigmann, John M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Donahue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1..1626
                                          Saccharomyces cerevisiae
                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hamilton, Brook, Smith & Reynolds, P.C
                                                                               DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                19921218
                                                                                                                       double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brian
                                                                                                                                                                                                                                                                                                                                                                                     US 07/539,906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US92/11107
                                                                                                                                                                                                                                                                                                        32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                     MIT-4787AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 42.6; DB 1;
Pred. No. 0.033;
0; Mismatches 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

TELEPHONE:

(619) 535-9001 535-8949

12:

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-07-814-964-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-041-886-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                 NFORMATION FOR SEQ ID NO: 12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (619) 535-894
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                 TELEPHONE: 617-861-6240
                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/539,906
FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    915 GCTGCTGTTTTCAAAGTAGGCTTCTCGTCTCTTCCGAAGCTCTTCTGAA 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 933 GCTGTAGAAGAAAAGAGGATTTCGTATTCAAATTTCAAAAGAAATCTGAA 982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                               REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: MIT-4787AAA
                                                                                                                                                                                                                              APPLICATION NUMBER: US
FILING DATE: 19911226
                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                               NAME: Granahan, Patricia
                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 1776 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
   ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12, Application US/07814964
o. 5359047
                                                                                                                                                                                                                                                                                                                                                              02173
                                                                                                                                                                                                                                                                                                                                                                                                         Lexington
                                                                                                                                                                                                                                                                                                                                                                                             ΜÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            2 Militia Drive
3292 base pairs
                                                    617-861-9540
                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
36..1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Essigmann, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                         Hamilton, Brook, Smith & Reynolds, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                US/07/814,964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42.8; DB 4; Length 1776; Pred. No. 0.021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches 42;
                                                                                                                                                                                                                                                                              Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LOCATION:
US-07-814-964-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-258-442-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence I
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
FILING DATE: 18-JUN-1990
                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION: NAME: Granahan, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: |
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 929 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             818 AGATGATGATGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        758 TGCTGCTGCTGCCAACTGCTGTTGTTGTTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         869 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT 928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                             TELEPHONE: bi/ CTELEPHONE: bi/
                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: MIT-4787AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watch 3.4%;
Local Similarity 64.9%;
                                                                  TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE:
                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
TOPOLOGY: lir
ropology:
                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12, Application US/08258442
5. 5670621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02173
                                                  nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lexington
                                                                                                                                                                                                                                                                                                                                                     Granahan, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΜĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lambda yPt
                                                                                       3292 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Toney, Jeffrey
Bruhn, Suzanne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lippard, Stephen J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Essigmann, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Donahue,
linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1..1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hamilton, Brook, Smith & Reynolds, P.C
                                                                                                                                                                                                                            617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Structure Specific Recognition Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brian A.
Jeffrey H.
Suzanne L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         us 07/539,906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/258,442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 42.6; DB Pred. No. 0.033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ğ
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                            RESULT 3
US-08-531-927B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-531-927B-3
                                                                                                                                                                                                       Sequence 1, Application US/08531927B Patent No. 5840491 GENERAL INFORMATION:
                                                                                                                                              Patent No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY:
LOCATION:
                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook,
STREET: Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
REFERENCE,DOCKET NUMBER: ATH95-01A
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP H6-251600
FILING DATE: 21-SEP-1994
                                                                                                                                                                         APPLICANT: Kakizuka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
COMPUTER READABLE FORM:
                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                              150
                                                                                                                                                                                                                                                                                                                                                                                                              917 TGCCGTTGTTTCTGCTGTAGAA-GAAAAGAGGATTTCGTATTCAATTTCAAAAGAA 975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           857 TGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGC 916
                                                                                                                                                                                                                                                                                                                                                          976 ATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAA 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                            210 TGTCCTGATAGGTCCCSCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGC 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
             COUNTRY: USA
ZIP: 02173-4799
                                                                                                                                                                                                                                                                                                                             90 AAACTTAAAAGAATAAATACACCATGAGAAAAACTATTCATAAGGAAAATACA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/531,927B FILING DATE: 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                            TGCTGYTGCTGTTTTGCTGCTGTCTGAAAACATTCAAAAGTGAAGTATATTTAAAAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        al Similarity 57.8
100; Conservative
                                                                                                                                                             5840491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02173-4799
                                                               Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
                                            Massachusetts
                                                                                                                                              INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         : 617-861-6240
617-861-9540
                                                                                                                                                                                          Kakizuka,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                         Disease Gene and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3.9%;
                                                                                                                                                                           , Akira
DNA Sequence Encoding the Machado-Joseph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Release #1.0, Version #1.30
                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         з:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 48.2; DB 2;
Pred. No. 0.00024;
2; Mismatches 70
                                                                                            Smith & Reynolds, P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                              91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ļ,
```

```
: Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LOCATION:
US-08-531-927B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-041-886-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 61.8
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
            CLASSIFICATION:
ATTORNBY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-1
                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Bredesen, I
APPLICANT: Rabizadeh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 1776 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP H
FILING DATE: 21-SEP-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Rel-
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               873 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        915 GCTGCTGTTTTTCAAAGTAGGCTTCTCGTCTCTCCGAAGCTCTTCTGAA 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          933 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAA 982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: UZIP: 92122
                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                            STREET: 4370 La
CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Granahan, Patric: REGISTRATION NUMBER: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 21-SEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                     FILING DATE:
                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12, Application US/09041886
5. 6235872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid
                                                                                                                                                                                                                                                                          California
                                                                                                                                                                                                                                                                                                            E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             617-861-9540
                                                                                                                                                                                                                                                         United States
                                                                                                                                                                                                                                                                                                                                                                                                                                  Bredesen, Dale E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.5%;
                                                                                                                                                                                                                                                                                                                                                               Proapoptotic Peptides, Dependence Polypeptides and Methods of Use 72
                                                                                                                                                                                                                                                                                                                                                                                                                     Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JP H6-251600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/531,927B
                                                                                                                   US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 42.8; DB Pred. No. 0.021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATH95-01A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Run

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic - nucleic search, using sw model
      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                   seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                 Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-729-264-5
1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    April 28, 2003, 23:25:03 ; Search time 51.9118 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aggtgtgagtccagccaaca.....gtaatacaactgtagtatag 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version
Copyright (c) 1993 - 2003
      /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/Packfiles1.seq:*
   325
1176
3292
3292
3292
3292
4000
2674
2674
278
278
277
2877
17257
484
10348
10348
10348
10348
10348
10348
10348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
                                                                                                                                                                                                                                                                                                                                    В
US-09-253-691-3...
US-08-531-927B-3
US-08-531-927B-3
US-08-531-927B-1
US-09-041-886-12
US-09-041-964-12
US-08-258-442-12
US-08-258-442-12
US-09-817-180-1
US-09-817-180-1
US-09-817-180-1
US-09-043-303-7
US-08-185-432-3
US-08-185-432-3
US-08-185-432-3
US-08-185-432-1
US-08-479-913E-1
US-08-479-913E-1
US-08-487-273B-41
US-08-457-273B-41
US-08-457-273B-41
US-08-453-265-5
US-08-453-265-5
US-09-043-303-10
US-09-043-303-11
US-09-043-303-11
US-09-043-303-11
US-09-043-303-11
US-09-044-303-16
                                                                                                                                                                                                                                                                                                                                    IJ
                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (without 7325.486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.1.4_p5_4578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alignments)
Million cell updates/sec
                       Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                             Patent No.
                                                                                                          Sequence
Sequence
                                                                                                                              Sequence
Sequence
                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                             Sequence
Sequence
              Sequence
                                                                                Sequence
                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                   Sequence
  Sequence
                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                Sequence
                                                                                           e 3, Appli
e 1, Appli
e 12, Appli
e 12, Appli
e 12, Appli
e 12, Appli
e 17, Appli
e 18, Appli
e 18, Appli
e 18, Appli
e 17, Appli
                                  41, Appl
13, Appl
14, Appl
5, Appli
5, Appli
                        10,
                                                                                                                    RESULT 2
US-08-531-927B-3/c
                                                                                                                                                                                        Ωy
                                                                                                                                                                                                               В
                                                                                                                                                                                                                                   QY
                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                   QY
                                                                                                                                                                   뫄
                                                                                                                                                                                                                                                                                                                                                          US-09-253-691-3
            TITLE OF INVENTION: DN
Patent NO. 5840491
TITLE OF INVENTION: Di
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                            Sequence 3, Application US/08531927B Patent No. 5840491
                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                               Query Match
                                                                      GENERAL INFORMATION:
APPLICANT: Kakizu
                                                                                                                                                                                                                140
  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                            99;
                                                                      Kakizuka,
```

0 0 0 0 0 0 0

Hamilton, Brook, Smith & Reynolds, P.C.

Disease Gene and 23

Uses Thereof

DNA Sequence Encoding the Machado-Joseph

Akira

000

0000

000000000

a	C	O	C	C	C	ი	a	C	Ô	C	ဂ	C	O	Q	ი	C	O
45	44	43	42	41	40	39	38	37	36	35	34	ω G	32	31	30	29	28
40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
3.2	3.2	ω 2	3.2	3. 2	-						-	3.2				3.2	
3366	3366	623	506	506	477	270	270	234	234	195	195	171	171	168	168	165	154
N	ب	4	N	ب	4	4	4	N	ب	N	ш	N	ب	N	_	4	N
US-08-267-803B-1	US-08-469-802B-1	US-09-043-303-5	US-08-267-803B-7	US-08-469-802B-7	US-09-135-994-1	US-09-664-977A-8	US-09-146-054-8	US-08-267-803B-3	US-08-469-802B-3	US-08-267-803B-2	US-08-469-802B-2	US-08-267-803B-5	US-08-469-802B-5	US-08-267-803B-4	US-08-469-802B-4	US-09-043-303-17	US-08-267-803B-6
Sequence 1, Appli	Sequence 1, Appli	Sequence 5, Appli	Sequence 7, Appli	Sequence 7, Appli	Sequence 1, Appli	Sequence 8, Appli	Sequence 8, Appli	Sequence 3, Appli	Sequence 3, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 5, Appli	Sequence 5, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 17, Appl	Sequence 6, Appli

ALIGNMENTS

```
RESULT 1
US-09-253-691-3/c
US-09-253-691-3/c
US-09-253-691-3/c
US-09-253-691-3/c
Patent No. 6124100
Patent No. 6124100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Dong Kyu JIN
TITLE OF INVENTION: Diagnostic Method and Kit for Neuropsychiatric Diseases
TITLE OF INVENTION: Using Trinucleotide Repeats Sequence
FILE REFERENCE: 1942/36
                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
SOFTWARE: WordPerfect
SEQ ID NO 3
LENGTH: 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/253,691
CURRENT FILING DATE: 1999-02-22
EARLIER APPLICATION NUMBER: KR 98-6,278
                                                                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER FILING DATE: 1996-02-26
                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: human
                                                                                                                                                                           873 GCTGCTGCTGCCGCCGCCGTTGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGTTTCT 932
                                993 CAAACAAAGAAACTGAGACAGAAAGTGGAAA 1023
                                                                                                                AACTTAAAAGAATAAATACACCATGAGAAAA 50
                                                                         GCTGTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                     4.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                3
6.1/Windows
                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                     Score 51.8;
Pred. No. 2
                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                       .5e-05;
                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                Gaps
                                                                                                                                                       141
```

```
RESULT 15
BE376590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                   Š
                                                           В
                                                                                           Qy
                                                                                                                                       밁
                                                                                                                                                                           Ş
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   296 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT 355
                                                                                                                                                                                                                                                                115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGG 174
295 CACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCACACATGT
                                                           211 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCCATCATCACCAACAACCGCTT 270
                                                                                  151
                                                                                                                                                                                                                         91 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCTTCCTCAGTGCNAG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCTTACCTTACCGTCCAAG 434
                                                                                                                                         CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT 210
                                                                                                                                                                                 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 663)

NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE376590 663 bp mRNA linear EST 21-JUL-2000 601226419F1 NCI_CGAP_Mam1 Mus musculus cDNA clone IMAGE:3584645 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Gilbert Smith, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.A.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE376590.1 GI:9321955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM8743 row: f column: 06
                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quality sequence stop: 498.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"

193 c 170 g 157 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clone="IMAGE:3584645"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                         14.8%;
                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                           Score 184; DB 10; Pred. No. 3.4e-32;
                                                                                                                                                                                                                                                                                                          85;
                                                                                                                                                                                                                                                                                                                                              Length 663;
                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                      Gaps
                         354
                                                                                                       294
                                                                                                                                                                                                                                                                                                          0;
```

```
δÃ
                                                                                                                Вb
331 GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTCGGATC 390
                                                                                                                271 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
```

밁 391 TGCCTTCCTCTCAGTGCAAG 410 TGCTTACCTTACCGTCCAAG 434

В

Search completed: April 29, 2003, 09:24:22 Job time: 2018.06 secs

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 236;
  429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                      369
                                                                                                                                                                                                          309
                                                                                                                                                                                                                                                                                                                                                                                                                        189
                                                                                                                                                                                                                                                              295
                                                                                                                                                                                                                                                                                                   249 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                    235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                        175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAAGGA 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
TGCCTTCCTCAGTGCAAG
                                                                                                                                                                                               CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT 368
                                                                                                                                                                                                                                             CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                             TGCTTACCTTACCGTCCAAG 434
                                                                                                                         GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                           GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC 428
                                                                                                                                                                                                                                                                                                                                                                                                             CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prepare mouse tissues. First strand cDNA was primed with a primer [5, GARAGARAGATCCAAGAGCTCTTTTTTTTTTTTTVN 3], cDNA was prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization to Rot = 5.0 and subtraction to Rot = 20.0. Second strand cDNA was prepared with the primer adapter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Host: SOLR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequence[5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XhoI and SstI. Cloning sites,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="mgd;mg1:1919308"
/translation="megswrdvlavlv1laqltasgssyq11egpqnvtvlkdseahf
/translation="megswrdvlavlv1laqltasgssyq11egpqnvtvlkdseahf
NCTVTHGWKLLMWTLNQMVVLSLTTQGP11TNNRFTYASYNSTDSF1SEL11HDVQPS
DSGSVQCSLQNSHGF6SAFLSVQDS1GEEGPALPTWA11LLAVAFSLLL1L11VL111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="data source:SPTR, source key:Q9NSI5, evidence:ISS
homolog to IGSF5 PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FCCCCASRREKEESTYQNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="BAB25436.1"
/db_xref="GI:12842010"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="FANTOM_DB:2010003D20"
/db_xref="MGD:MGI:1904786"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="small intestine"
/cione_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ctone="2010003D20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               stage="adult"
448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 185.6; DB 1
Pred. No. 1.6e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              374 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROTEIN (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11; Length 1552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                      308
                                                                                                                                                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

멍 Š 멍

Вb Q

QΥ 밁 Qy д Ωy 밁 Ω

```
Qy
                                                                                                                                                      B
                                                                      В
                                                                                                            δÃ
                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                             Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
AI425363
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
295 CACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                          116
                                                                                                                                                                                                175
                                                                                                                                                                                                                                                                         115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                  236 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                       CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCCTCT 234
                                                                                                                                                                                                                                 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 175
                                                                                                                                                 CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT 235
                                                                                                       CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Marra M/WashU-NCI Mouse EST Project 1999 Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               correct orientation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Waterston, R. and Wilson, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mx91d09.y1 Soares mouse NML Mus musculus cDNA clone IMAGE:6937135', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AI425363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AI425363.1 GI:4271294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                   119
                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  constructed and normalized by Bento Soares and \mathbf{M}.\mathtt{Fatima} Bonaldo. \mathtt{"}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Eco RI sites of the modified pT7T3 vector.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /Clone_lib="Soares mouse NML"
/tissue_type="Liver"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:693713"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 to 486)
                                                                                                                                                                                                                                                                                                                                                                                                                                   133 c
                                                                                                                                                                                                                                                                                                                                             14.9%;
73.4%;
                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                           Score 184.6; DB 9;
Pred. No. 2.3e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                             126 g
                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                 107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                       85;
                                                                                                                                                                                                                                                                                                                                                                                                                               1 others
                                                                                                                                                                                                                                                                                                                                                             Length 486;
                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST 15-MAR-2000
                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Library
                        354
                                                                  295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                                                                                                                                                                                                                       0
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                       AK008060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                  TITLE
                                                                                                                                                                     ORGANISM
MEDLINE
                         JOURNAL
                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCCTTCCTCAGTGCAAG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCTTACCTTACCGTCCAAG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 216
                                                                                                                                                                                                                                                                                                                       Mus musculus adult male small intestine cDNA, RIKEN full-length enriched library, clone:2010003D20:homolog to IGSF5 PROTEIN (FRAGMENT), full insert sequence.
                    Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                         Mus musculus (strain:C57BL/6J) adult male small intestine cDNA to mRNA, clone_lib:RIKEN full-length enriched mouse cDNA library
Meth. Enzymol.
99279253
                                                                                                                  Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                          clone: 2010003D20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plate: LLAM10260 row: n column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                         CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                providing samples: Gilbert Smith, NIH" a 277 c 242 g 179 t.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:4459973"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
                                                                                                             Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                        GI:12842009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 185.6; DB 12;
Pred. No. 1.5e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     628.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

밁 Ş

Ş 밁 Ş 밁 δÃ В Q В Q

```
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kawai, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Alzawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batlov, S., Casavant, T., Fleischmann, W., Gasterland, T., Gissi, C., King, B., Kochiwa, H., Xuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pescole, G., Quackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Barshio, B., Bakai, K., Okido, T., Bujunga, N., Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D. A., Kaniya, M., Lee, N.H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakaneto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suzuki, H., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., and Hayashiyaki Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Adachi, J., Alizawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hume, D., Imotani, K., Ishil, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Myazaki, A., Nishi, K., Nomura, K., Kurihara, C., Matsuyama, T., Myazaki, A., Nishi, K., Nomura, K., Kurihara, C., Matsuyama, T., Myazaki, K., Sano, H., Sasaki, D., Saito, R., Saito, R., Sakaki, C., Sakai, K., Sano, H., Sasaki, T., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, T., Saito, R., Sakai, C., Sakai, Y., Shibata, Y., Shi
                                                                                                                                                                                                                      Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken
                                                                                                                 Please visit our web site (http://genome.gsc.riken.go.jp/) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P. Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Tishi,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K., Yamamoto,R., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yasunishi,A.,
Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Hayashizaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shibata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20499374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 1552)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yoshida, K., Yoshino, M., Muramatsu, M. and
```

```
В
                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                  REFERENCE
                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                 AW990468
                                                                                                                                                                                                                                                                                                                                                                                    RESULT
                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                           ORGANISM
                                                           JOURNAL
                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            115 AGGTTCTGGGTCATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             415 TGCTTACCTTACCGTCCAAG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    355 GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      236 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176 CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
nes 236; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCTTCCTCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTGACATGGTGGTGGTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High
                                                                                                                                                                                                                                                                                                         AW990468 611 bp mRNA linear EST 02-JUI uf37d05.yl Soares_mammary_gland_NMLMG Mus musculus cDNA clone IMAGE:1513545 5' similar to TR:060962 060962 L549.1. ; mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq
                                     Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                            NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.National Cancer Institute, Cancer Genome Anat
                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Email: cgapbs-r@mail.nih.gov
This clone is available roya
                                                                            Tumor Gene Index
                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                               nouse mouse
                                                                                                                                                                                                                                                  AW990468.1
                                                                                                                                    (bases 1 to 611)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         primer: -28m13 rev2 ET from Amersham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       quality sequence stop:
clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and Eco RI sites of the modified pT7T3 vector. Library constructed and normalized by Bento Soares and M.Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone-"IMAGE:693713"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Vector: pT7T3D-Pac (Pharmacia) with a modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="Soares mouse NML"
/tissue_type="Liver"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                    GI:8186027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 185.6; DB 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           454.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84;
                                                                                              Anatomy Project (CGAP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 471;
   contact
                                                                                                                                                                                                                                                                                                                                             EST 02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
0
                                                                                                                                                       Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
   the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
BG173684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                           COMMENT
                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 236;
                                                                                JOURNAL
                                                                                                      TITLE
                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     115 AGGITCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTCTCAGAGGTACGACCAGGGGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                        mRNA sequence.
BG173684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seq primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MGI:940397
                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith,
                                                                              Unpublished (1999)
                                                                                                 1 (bases 1 to 931)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, N
                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                               602336823F1 NCI_CGAP_Mam1 Mus
                                                                                                                                                                                                                                                                                                                                                  BG173684
                                                         Contact: Robert Strausberg, Ph.D
                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                     BG173684.1 GI:12680387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
cDNA Library Preparation: Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    מ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Wector: pT7T3D-Pac (Pharmacia) with a modified /note="Wector: pT7T3D-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. " a 155 c 156 g 148 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="mammary gland"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Soares_mammary_gland_NMLMG"
/sex="female (lactating)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:1513545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 185.6; DB 1
Pred. No. 1.4e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                    931 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         474.
                                                                                                                                                                                                                                                                                                                                   musculus cDNA clone IMAGE:4459973
                                                                                                   Mammalian Gene Collection (MGC)
                     Ph.D.
                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          611;
                                                                                                                                                                                                                                                                                                                                 EST 06-FEB-2001
MGE:4459973 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294
```

<u></u>

0;

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
AV601192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 539 TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTTGTTCCGGAGCCCAGC 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTG 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCGCGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTCGGTGTCCCCAAGACACTGGAGGTGGT 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCGTGGCTACCTGGAAGACCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      198;
                                                   Contact: Yoshikazu Sugimoto
Animal Genetics Division
Shirakawa Institute of Animal Genetics
Odakura, Nishigo, Nishi-shirakawa, Fuk
Tel: 81-248-25-5641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@sc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170) Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                              Establishment of a high throughput EST sequencing syspoly(A) tail-removed cDNA libraries and determination
                                                                                                                                                                                                                                                Takasuga, A., Hirotsune, S., Itoh, R., Jitohzono, A., Suzuki, H., Aso, H
                                                                                                                                                                                                                                                                                                                                                                                                           5', mRNA sequence.
AV601192
                                                                                                                                                                                                                                                                                                                                                                                                                                 AV601192 Bos taurus kidney fetus Bos taurus 5', mRNA sequence.
Single
                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                        Bos taurus
                                                                                                                                                                                                                                                                                                                                                            COW.
                                                                                                                                                                                                                                                                                                                                                                          AV601192.1
EST.
                                  Fax: 81-248-25-5725
                                                                                                                                                                              bovine ESTs
                                                                                                                                                                                                                                     and Sugimoto,Y
                                                                                                                                                                                                                                                                                      Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LIBRARY
                                                                                                                                                                                                                                                                    (bases 1 to 524)
                                                                                                                                                           eic Acids Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.Site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vector : R.Site 1 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequencing: -21M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tracking errors.
 pass
                kazusugi@cocoa.ocn.ne.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
159 c 143 g 207 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Pan troglodytes"
/db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /sex≃"male'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="PTB-112N07.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             GI:9723510
 sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : SacI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : pKS145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saci
                                                                                                                                                                                                                                                                                      Bos.
                                                                                                                                                           29 (22),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 190.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               524 bp
                                                                                                                                                           E108 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                       Fukushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 677;
                                                                                                                                                                                                                                                                                                                                                                                                                                              cDNA clone E1KI002H04
                                                                   961-8061, Japan
                                                                                                                                                                                              system using
tion of 36,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 27-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
AA265274
                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Locus
                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        173 GGCTCCCAGGCTCCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATCTGGGCCT 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 GTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAG 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               293 TTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAAT 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220 GCAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGTCCCAAGAATGTCACAGCCCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGA 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTGC 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGCAACTCAGCGATGCCGGGCAAGTNAAATGCAGCCTTCANAACAGCAATCGGGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCACTTCGGCAAGCTACCAAGAGGGGGGGAACTTCATCTNTGAGATGATAATTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGAGAGGCACAGTGGTGCTGAGCATGACCATGAGAGACCATCATCACCAGTGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCGGAGGCTCGCTTCAACTGCACCATCTCCCCAGGGCTGGAAGCTCGTCATGTGGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            232;
                                                                                                 WashU-HHMI Mouse EST Project
Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Lo
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 471)

Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuc Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Geisel, S., Kucaba, T., Lacy, M., Tan, F., Underwood, K., Moore, B., Schellenberg, K., Steptoe, Tan, F., Underwood, K., Moore, B., and T., Tan, Tan, T., Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This clone was obtained from a polyA-deleted cDNA library.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                      Unpublished (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mx91d09.rl Soares mouse 5', mRNA sequence.
                                                                     Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                       Contact: Marra M/Mouse EST Project
                                                                                                                                                                                                                                                                                                                                     The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA265274
                                                                                                                                                                                                                                                                                                                                                                        Waterston, R
                                                                                                                                                                                                                                                                                                                                                                                                           Theising, B., Wylie, T., Lennon, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA265274.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
clone is available royalty-free through LLNL;
E Consortium (info@image.llnl.gov) for further:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Bos taurus"
/db_xref="taxon:9913"
/clone="EBK1002404"
/clone_lib="Bos taurus kidney for fissue_type="kidney"
/dev_stage="fetus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     was deleted from a Not1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Vector: pZL1; Site_1: Sal1; Site_2: Noti; Poly A was deleted from a Not1 site"

135 c 168 g 96 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:1901370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 190; DB 10;
Pred. No. 1.3e-33;
0; Mismatches 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NML Mus musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gd
                                                                                                                                                                                                                                                                                                                                                                                                           Soares, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fetus"
                                                                                                                                                                      Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                              Wilson, R. and
                                                                                                                                                                         ŏ
                                  contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMAGE:693713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST 20-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dubuque, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     399
```

further information

```
RESULT 7
AG069679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                     REFERENCE
                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                    LOCUS
                          TITLE
                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity Matches 243; Conserv
    JOURNAL
                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                           499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 GTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAG 172
                                                                                                                                                                                                                                                                                                                                                                                                           GCCGCCTTCCTTTCTGTTC 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGCTTACCTTACCGTCC 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGGAGCCCAGTGATTCGGGGAACATCAGATCAGCCCTCCAGAACAGTCGCCTGCATGGA 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCACTTCGGCAAGCTACCAAGAGGGCGGGGAACTTCATCTCTGAGATGATAATTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCGGAGGCTCGCTTCAACTGCACCATCTCCCAGGGCTGGAAGCTCGTCATGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCT 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGTCCCAAGAATGTCACAGCCCTGAAG 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCAACTGAGCGATGCCGGGCAAGTCAAATGCAGCCTTCAGAACAGCAATCGGGATGGA 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGAGAGGCACAGTGGTGCTGAGCATGACACCTAATGAGACCATCATCACCAGTGACCGC
BAC end sequences
Unpublished
                                                                                                                                                                                                                 GSS
                                                                                                                                                                                                                                   Pan troglodytes DNA, clone: AG069679
AG069679.1 GI:16621481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BACKWARD: GITTTCCCAGTCACGACG
Plate: 27 row: H column: 19
Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: tads@anri.barc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscor
                                                                                                                                             Pan troglodytes
                                                                                                                                                                                         Pan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 Rm 2A, Beltsville, MD 20705, USA
                                         Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                    AG069679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCR PRimers
                                                                                                                                                                   troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Library clone:PTB-060F12.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301 504 8416
301 504 8414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI; Library made from pooled mRNA isolated from mammary tissues at eight physiological, developmental, and disease states."

133 c 165 g 102 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="BARC 5BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                        Eutheria;
                                                                                                                          Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15.9%;
76.2%;
                                                                                                      Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 197.4; DB : Pred. No. 2.5e-35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                    622
                                                                                                                                                                                                                                                                              2 bp DNA
PTB-060F12.F,
                                                                                                      Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                                        linear GSS 03-NOV-200 genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

B

밁 Q 망 Q В δÃ 망 Qγ

õ

```
JOURNAL
REFERENCE
                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 8
AG107877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                          TITLE
                                                                             AUTHORS
                                                                                                                                           TITLE
                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72 TCCGCGGAGCTCGGTCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTTGTTCCGGAGCCCAGC 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTCGGTGTCCCCAAGACACTGGAGGTGGT 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                   677 bp DNA
Pan troglodytes DNA, clone: PTB-112N07.F,
AG107877
GC. 26:16728395
Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

Direct Submission
Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp/, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                         Pan troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male
BAC Library clone:PTB-112N07.F.
Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 622)
Fujiyama,A., Hattori,M., Toyoda,A.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                    Unpublished
                                                                                                                                                           Fujiyama,A., Hattori,M., Toyoda,A.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                         BAC end sequences of Library PTB
                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cione tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIMERS
                                                                                                (bases 1 to 677)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vector : pKS145
R.Site 1 : SacI
R.Site 2 : SacI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequencing: -21M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="PTB-060F12.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:9598"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Pan troglodytes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.4%;
94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 190.8; DB 17; Pred. No. 8.9e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                               Taylor, T.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Taylor, T.D., Yada, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Male
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BAC Library"
                                                                                                                                                                                                                                                                                                                                                                                genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                  survey
                                                                                                                                                                                                                                                                                                                                                                                                    GSS 03-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                    sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
Qy.
                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
BE032610
                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                          COMMENT
                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                  rocas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                 TITLE
                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115 AGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       282 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATT 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGA 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTGACATGGTGCTAAGCGTCAGGCCCCATGGAGCCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             337;
                                                                                                                                                                                                                                                                 pig.
Sus scrofa
                                                                                                                                                                                                                                                                                                                           BE032610
132035 MARC 1PIG Sus so
BE032610
BE032610.1 GI:8327619
                                                                                                                                                              Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A., and Keele, J.W.
                  WSDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, US
Tel: 402 762 4366
Fax: 402 762 4390
                                                                                        Unpublished (2000)
Contact: Smith TPL
                                                                                                                         Design and use of two pooled EST discovery in swine
                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
1 (bases 1 to 527)
Fahrenkrug, S.C., Freking, B.A., Rohrer, G.A., Smith, T.P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                               MARC 1PIG Sus scrofa cDNA
smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    was cleaved with BamHI and XhoI. Vector: a modified pBluescript KS(+) after bulk excision from Lambda FLC I." a 167\ {
m c} 161\ {
m g} 149\ {
m t}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 259; DB 10;
Pred. No. 1.4e-49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 130;
                                                                                                                                                                                                                                                                                                                                                                                  527 bp
                                                                                                                                             tissue
                                                                                                                                                                                                                                                                                                                                                            mRNA linear
5', mRNA sequence
                                                                                                                                             normalized cDNA
                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                            libraries
                                                                                                                                                                               Laegreid, W.W.
                                                                                                                                                                                                                                                     Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                EST 09-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                Casas, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
```

20

밁 Ş

뭐 γQ В ð B Вþ

В ρy В Š δÃ

В

```
RESULT 6
BE476432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
 COMMENT
                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                             Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                     REFERENCE
                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                JOURNAL
                                                   TITLE
                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                                           517
                                                                                                                                                                                                                                                                                                                                                                                                          473
                                                                                                                                                                                                                                                                                                                                                                                                                                             457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 GTAGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAG 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCTCGGAGGCTCGACTGCACCATCTCCCAGGGCTGGAAGCTCATCATGTGGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGCTTGTGGATCCGGCAATGAAATCTTAGAGGGTCCCAGGAACGTCACGGCGGTGAAG 216
                                                                                                                                                                                                                                                                                                                                                                           GTCCTTGCGGA 527
                                                                                                                                                                                                                                                                                                                                                                                                          GTCGCTGAGAA 483
                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGCTTTCCCTTTCCGTCCAAGTCATGGGGGGTGCTGCTCATTCCCGGAGGCAGCCTCGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTA 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCAGCTCAGTGATGCCGGGCAGGTCAAATGCAGCCTCCAGAACAGTGACCGGGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGAAAGGCACGGTGGTTCTGAGCGTCACGCCCACCGAGCCCATCATCACCAACGACCGA 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCACGTCTGCAAGTTATGAAGAGGGCGGTAACTTCATCTCTGAGATGATCATCCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293;
                                                                                                                                                                                                                                              BE476432
159670 BARC
BE476432
                                                                                                                                                                                                             EST.
Unpublished (2000)
Contact: Sonstegard TS
                                   gland cDNA library
                                                  Wells, K.D.
Mapping of Expressed Sequence
                                                                                   Bovidae; Bovinae; Bos.
1 (bases 1 to 517)
Sonstegard, T.S., Capuc
                                                                                                                                                                          Bos taurus
                                                                                                                                                                                            COW
                                                                                                                                                                                                                              BE476432.1 GI:9595965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BACKWARD: GTTTTCCCAGTCACGACG
Plate: 63 row: E column: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 1\!\!/8
                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           te: 63 row: E column: 13 primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ည
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Vector: pCMV SPORT6; Site_1: NotI; Site_2: SalI;
Library made from pooled tissue from day 11, 13, 15, 20,
and 30 embryos."
147 c 176 g 99 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9823"
/clone_lib="MARC 1PIG"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Sus scrofa"
                                                                                                                                                                                                                                                               5BOV Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19.9%;
79.0%;
                                                                                     Capuco, A.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 246.2; DB 1
Pred. No. 1.2e-46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                 cDNA 5', mRNA sequence
                                                   Tags from a normalized
                                                                                   Van Tassell, C.P., Ashwell, M.S.
                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78;
                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 527;
                                                   bovine mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                    28-AUG-2000
                                                                                                                                          Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              292
                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ې...
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 3
BG740428
밁
                                Q
                                                                       밁
                                                                                                          Š
                                                                                                                                                 밁
                                                                                                                                                                                 Ş
                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                 1031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                                                                        971 AAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAAC 1030
                                                                                                                                                                                                                                                                                                                                                                                              Local
             GAGAAGGTCAGTAATACAACTGTAGTATA 1239
                                                                       GACTTGTGTGGCAAGAGCTGAAGGACTTGCAGGCCAGCAGTCT 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --GGGCACTTTATGAGGGTCTGAGTGTCCTGGAACTCA-CACACTGGGCAACGGGACCTT 685
                                                                                                                                                                    TGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCCCCACCAGCGGGCT
                                                                                                                                                  TGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCT
                                                                                                                                                                                                                            TCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCCCCTCCCCAAATCC
                                                                                                                                                                                                                                                               TCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCTCTCCCCCAAATCC
                                                                                                                                                                                                                                                                                                GACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://image.llnl.gov
Plate: LLAM10635 row: b column:
High quality sequence stop: 725.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) I Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutherla; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 725)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG740428 7
602633817f1 NCI_CGAP_Skn3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tissue Procurement: James Cleaver,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG740428.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the I.M.A.G.E. Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        227
                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="NCI_CGAP_Skn3"
/lab_host="HIOB (TI phage-resistant)"
/lab_host="HIOB (TI phage-resistant)"
/note="Organ: skin; Vector: pcMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT
Average insert size I.Skb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
a 163 c 159 g 176 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4778789"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:14051081
                                                                                                                                                                                                                                                                                                                                                                                           21.4%;
99.3%;
                                                                                                                                                                                                                                                                                                                                                                         Score 265.8; DB 12;
Pred. No. 3.7e-51;
Pred. No. 3.7e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            725 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Life Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p mRNA linear EST 15-MAY-2001 sapiens cDNA clone IMAGE:4778789 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M.D.
                                                                                                                                                                                                                                                                                                                                                                                                              DB 12; Length 725;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           697
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                              1210
                                                                                                                                                                                     1150
                                                                                                                                                                                                                                                               1090
                                                                                                                                                                                                                                                                                                   436
                                                                                                                                                                                                                            496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                         616
                                                                                                                                                  556
                                                                                                                                                                                                                                                                                                                                                                             0
```

```
RESULT 4
BB663870
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BB663870
BB663870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: genome-res@gsc.riken.go.jp,
URL:http://genome.gsc.riken.go.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., It,
/M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,
Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo,S., Shinagawa,A., Saito,T., Kiyosawa,H., Yamanaka,I., Aizawa,K., Fukuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Smehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Muramatsu, M. and Hayashizaki, Y. RIKEN Mouse ESTs (Arakawa, T., e Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ,M., KOYA,S., MATSUYAMA,T., Miyazaki,A., Nomura,K., Ohno,M., Okazaki,Y., Okido,T., Saito,R., Sakai,C., Sakai,K., Sano,H., St., D., Shibata,K., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 631)
Arakawa, T., Carninci, P., Fukuda, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequencing pipeline with 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tagami, M., Tagawa, A., Takahashi, F., Takeda, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human Genome Sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Please visit our web site (http://genome.gsc.riken.go.jp) for
further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e mouse tissues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Computational Analysis of Full-Length Mouse cDNAs Compared with Juman Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RIKEN integrated sequence analysis (RISA) system--384-format requencing pipeline with 384 multicapillary sequencer. Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Konno,H., Fukunishi,Y., Shibata,K., Itoh,M., Carninci,P.,
Y. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J.,
M., Koya,S., Matsuyama,T., Miyazaki,A., Nomura,K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   631 bp mRNA linear
RIKEN full-length enriched, 0 day neonat
cDNA clone E030016M12 5', mRNA sequence.
                        prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory RIKEN. Division of Experimental Animal Research in Rik
contributed to prepare mouse tissues. 1st strand cDNA was
                                                                                                                                                                            /dev_stage="0 day neonate"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                   /note="Site_1: SalI; Site_2: BamHI; cDNA library was
                                                                                                                                                                                                                                            /tissue_type="lung"
                                                                                                                                                                                                                                                                                                    /clone_lib="RIKEN full-length enriched, 0
                                                                                                                                                                                                                                                                                                                                   /clone="E030016M12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Rodentia; Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA ....
d, 0 day neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Furuno, M., Hanagaki, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tanaka,T., Matsuura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kira, A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Konno, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Genome Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Toya, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sugahara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hara,A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sasaki
```

```
RESULT 2
BF784177
                                                                                                                                                                     Š
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                    δÃ
                                          DEFINITION
                                                                                                                                           B
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
          ACCESSION
                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρŅ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                           747
                                                                                                                                                                                                                                                                                                                                                                                                    509
                                                                                                                                                                                                                                                                                           595 CAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT
                                                                                                                                                                                                                                                                                                                                     569
                                                                                                                                                                                                                                                                                                                                                                                                                                   475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       149 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                   GACTTGCGTGGCTACCTGGAAGACCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCAC
                                                                                                                                                                                                                                                                                                                                                   TATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCC 594
                                                                                                                                                                                                                                                                                                                                                                                         CACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGA 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCTTCCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTATAGT 508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAATCTTGTAGT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                        TGTGGTTCAGCTTCCAC
                                                                                                                                                                     TGTGATTCGGTGTCCCC 731
                                                                                                                                                                                                  GACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCAGCAAGTCCTTAACTGTCAA-CTGAC
                                                                                                                                                                                                                                                               GGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACAACA-TGGGCAACGGGACCTT
                                                                                                                                                                                                                                                                                                                             TATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
      BE784177 794 bp mRNA linear EST 12-JAN-20 602108039F1 NCI_CGAP_Kid14 Mus musculus cDNA clone IMAGE:4236489 BF784177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dr. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Priscilla Furth, NIH Reference for transgenic model: Li et al., Cell Growth and Differentiation 7, 3-11 (1996)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="tumor, gross tissue"
/dev_stage="5 months"
/lab_host="DHIOB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="NCI_CGAP_Mam4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="NMRI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lone="IMAGE:4917803"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches 178; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 308.2; DB 12; Pred. No. 5.4e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                   EST 12-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۷,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                654
                                                                                                                                                                                                  746
                                                                                                                                                                                                                                                               687
                                                                                                                                                                                                                                                                                                                               628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              448
Qy
                                Вр
                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                            В
                                                               Ş
                                                                                                 밁
                                                                                                                                                                Ъ
                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                            QУ
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                 509
                                                                                                                                 475
                                                                                                                                                                  449
                                                                                                                                                                                                                                                                                                                                                                                                                                                         175
                                                                                                                                                                                               415
                                                                                                                                                                                                                               389
                                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
```

```
595 CAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355 GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCAIGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                329 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235 CAGTGACATGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                             CACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGGA 568
                                                                                                                                                                                                                                    CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGA 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                  TATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCC 594
                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTXAAGGA 208
                                                                                                                                                                                                                                                                                                  TGCCTTCCTCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTAATAGT
                                                                                                                                                                                                                                                                                                                                                   TGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9844 row: n column: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              High quality sequence stop: 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; 1 (bases 1 to 794)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF784177.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:4236489"
/clone_lib="NCI_CGAP_Kid14"
/clone_lib="NCI_CGAP_Kid14"
/lab_host="DH10B (T1 phage=resistant)"
/note="Organ: kidney; Vector: pcMY-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. priner: Oligo dT:
Average insert size 1.75 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library. | "
a 214 c 215 g 179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:12089213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 278.6;
Pred. No. 4e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          174; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Murinae; Mus
654
                                                       628
                                                                                                                                                                                                                                                                                                                                                      474
                                                                                                                                                                                                                                                                                                                                                                                                              448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ьe
```

```
OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                           Result
                                                                                  No.
                                                                                                                                      pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
259
246.2
197./
                                   308.2
278.6
265.8
                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           April 28, 2003, 23:25:02; Search time 2011.06 Seconds (without alignments) 9985.963 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-729-264-5
1240
                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16154066 segs, 8097743376 residues
                                                                                                                                                                                      24
25
26
27
    24.9
22.5
21.4
20.9
19.9
15.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5:1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aggtgtgagtccagccaaca....
                                                                                                                                                                                  em_gss_other:*
em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                                                            gb_est1:*
                                                                                                                                                                                                                                                                                                                                                                                                      em_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                   em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                              em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                       em_estov:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_estin:
                                                                                                                                                                                                                                                                gb_gss:*
em_gss_hum:*
em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                      em_gss_mus:*
                                                                                                                                                                                                                                em_gss_mam:*
                                                                                                                                                                                                                                            em_gss_fun:*
                                                                                                                                                                                                                                                     em_gss_vrt:*
                                                                                                                                                                                                                                                                                                               em_estom:*
                                                                                                                                                                                                                                                                                                                       em_estfun:*
                                                                                                                                                                                                                                                                                                                                    gb_est5:*
                                                                                                                                                                                                                                                                                                                                               gb_est4:*
                                                                                                                                                                                                                                                                                                                                                        gb_est3:*
                                                                                                                                                                                                                                                                                                                                                                     gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                gb_est2:*
                                                                                 Length DB
     12
10
10
10
                                                                                   IJ
    BE032610
BE476432
                          BG740428
BB663870
                                                BG863468
BF784177
                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .....gtaatacaactgtagtatag 1240
    BG863468 602796941
BE784177 602108039
BG740428 602633817
BB663870 BB663870
BE032610 132035 MA
BE476432 159670 BA
                                                                                   Description
                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                 RESULT 1
BG863468
                                                                                                                                            COMMENT
                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                o o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O
        FEATURES
                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                                                          0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000
                                                                                                                                                        JOURNAL
                                                                                                                                                                   TITLE
                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24
27
27
28
29
31
32
                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                           BG863468.1
                                                                                                                                                                                                                                     nouse mouse.
```

CTS .	ALIGNMENTS					
L	CNS0381E	17		4.0		5
5054 GM02059.	AA695064	9		4.0	ø	4
31233 AV43123	AV431233	10			50	ω
95624 HS	AQ595624	17			50	N
13259 Pan tro	AG113259	17			50.6	μ,
4929 AL514929	AL514929	ø			52.4	0
5062	AI756062	. و			52.6	٥
4502	BG445021	12		4.5	56	8
2434	AQ224346	17			58.4	7
5436	BB564363	10			63.2	ייס
1208	AW112084	10			67.8	01 1
3138	BB531388	10		•	77	
3973	AI788973	9		•	78.6	ω
3720	AI648720	9			78.6	0
7601	AI647601	9		•	78.6	_
371	AQ403719	17		•	98.4	O
995	N93995	14		•	100	v
351	N47851	14				w
5427	BI454276	13		•	102.8	7
287	BI452873	13		œ	110	٠,١
1222	AG142221	17		0	124	0, ,
1613	BB846133	10		0		- '
1004	BF040046	12		0		ω,
1177	AZ411779	17		11.6	143.8	~
1657	BB846577	10				
)785	AI790785	9		N.		_
3300	AI788300	9		2		Ψ.
999(BG206666	12		2		ω.
1962	AZ379623	17		13.6		~
2521	BB625217	10				01
659	BE376590	10				٠.
363	AI425363	9				_
AK008060 Mus muscu	AK008060	11	1552	15.0	185.6	ω.
368	BG173684	12		5		
046	AW990468	10		5		
274	AA265274	9		5		_
0119	AV601192	10				•
10787	AG107877	17	677	15.4	190.8	~
069679 Pan trog	06967	17	622	15.4	90.	-

BBG863468
BG863468
BG863468
ITON 602799941F1 NCI_CGAP_Mam4 Mus musculus cDNA clone IMAGE:4917803 57, From BG863468
BG863468.1 GI:14214006
SET.
Mus musculus
EST.
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus Musmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 784)
1 (pases 1 to 784)
1

```
; NAME/KEY:
; LOCATION:
US-08-185-432-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                             ; TYPE: DNA; ORCANISM: Artificial sequence; PEATURE: NAME/KEY: misc_feature; NAME/KEY: misc_feature; OTHER INFORMATION: Plasmid pGRO403R US-08-479-913E-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-08-479-913E-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/08479913E Patent No. 6416998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Query Match 3.5%; Score 40.8; DB 4; Length 6177; Best Local Similarity 75.0%; Pred. No. 0.097; Matches 51; Conservative 0; Mismatches 17; Indels 0.
                                                                                                                                                                                                                      SOFTWARE: MicroSoft Word 97
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 7326-(
TELECHMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEFAX: (212) 869-8864/9741
                                                                                                                                                                                                                                                       APPLICANT: O'MAILEY, Bert W.
APPLICANT: Tsai, Ming-Ter
APPLICANT: Tsai, Ming-Ter
APPLICANT: Ledebur, Harry C.
APPLICANT: Kittle, Joseph D.
APPLICANT: Kittle, Joseph D.
APPLICANT: Kittle, Joseph D.
APPLICANT: MODIFIED STEROID HORMONES FOR GENE THERAPY AND METHODS FOR THEIR
FILE REFERENCE: 121/133
CURRENT APPLICATION NUMBER: US/08/479,913E
CURRENT FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: US 07/939,246
PRIOR FILING DATE: 1992-09-02
NUMBER OF SEQ ID NOS: 6
PRIOR FILING DATE: 1992-09-02
NUMBER OF SEQ ID NOS: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                   LENGTH: 6177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2928 GCTGTTGCTGTCGCGGATGCAGTGGTAAT 2900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2988 GCTGCTGCTGCTGCTGCTGCTGCTGCATCTGCAGCTGTTGCTGCTGCTGCTGCTCCC 2929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: cDNA/DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     801 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 861 GCTGTAGAAGAAAAAGAGGATTTCGTATT 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/185,432 FILING DATE: 21-JAN-1994 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5063 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
864..1349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
3439..3736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1944..3370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7326-006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 41; DB 1; Length 5063; Pred. No. 0.076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30;
        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
          0,
```

Search completed: April 29, 2003, 10:49:49 Job time: 81.8976 secs

```
δÃ
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-185-432-3/c
                                                                                                                                                US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                           US-08-185-432-3
                                                                                               Sequence 23, Application US/08185432 Patent No. 5750652 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/08185432
Patent No. 5750652
                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (212) 869-8864/9
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/185,432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 3771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 73;
TELECOMMUNICATION INFORMATION: (212) 790-9090
TELEPHONE: (212) 790-9090
                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                             1815 GCTGTTGCTCGCGGATGCAGTGGTAAT 1787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
      TITLE
                     APPLICANT:
                                   APPLICANT:
                                                    APPLICANT:
                                                                                                                                                                                                                                                                           FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION: NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                             861 GCTGTAGAAGAAAAAGAGGATTTCGTATT 889
                                                                                                                                                                                                                                                                                            NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                         ocal Similarity
     OF INVENTION:
                                                                                                                                                                                                                                                                                                                                             59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1155 Avenue of the Americas
                                                                               Artavanis-Tsakonas, Spyridon
                                               Busseau, Isabelle
Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Artavanis-Tsakonas, Spyridon
Busseau, Isabelle
                  Matsuno,
                                     Xu, Tian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
345..2558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PENNIE & EDMONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      869-8864/9741
                                                                                                                                                                                                                                                                                                                                                          3.5%;
66.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DELTEX PROTEINS, NUCLÈIC ACIDS, AND ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS
Kenji
DELTEX PROTEINS, NUCLEIC ACIDS, AND
                                                                                                                                                                                                                                                                                                                                           0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7326-006
                                                                                                                                                                                                                                                                                                                                                       Score 41; DB 1; Length 3771; Pred. No. 0.064;
                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                           30;
                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                           0;
```

```
B
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
US-08-185-432-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: cDNA US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (214) TELEFAX: 66141 PENNIE
TELEX: 66141 PENNIE
TELEX: 66141 PENNIE
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 23:
SEQUIENCE CHARACTERISTICS:
FRIGHT: 3771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 59; Conserv
                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08185432 Patent No. 5750652
                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
              COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1957 GCTGTTGCTGTCGCGGATGCAGTGGTAAT 1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                     TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1897 GCTGCTGCTGCCTGTTGCTGCTGTTGCATCTGCAGCTGTTGCTGCTTGTTGCTGCT 1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS NUMBER OF SEQUENCES: 23
                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 861 GCTGTAGAAGAAAAAGAGGATTTCGTATT 889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/0 FILING DATE: 21-JAN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP:
                                                                                                                CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Misrock, S. Leslie REGISTRATION NUMBER: 18,8
 SOFTWARE:
                                                                                                                                                   STREET:
                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRY: U.S.A.
10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New York
                                                                                                                                                     1155 Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1155 Avenue of the Americas
                                                                                                                                                                                                                                                     Xu, Tian
Matsuno,
                                                                                                                                                                                                                                                                                                         Busseau, Isabelle
                                                                                                                                                                                                                                                                                     Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                      Artavanis-Tsakonas, Spyridon
PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                   PENNIE & EDMONDS
55 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PENNIE & EDMONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.5%;
                                                                                                                                                                                                    REDJI REDITEX PROTEINS, NUCLEIC ACIDS, AND ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/185,432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7326-006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 41; DB 1;
Pred. No. 0.064;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
 Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 3771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

PCT-US92-11107-12

Query Match Best Local :

3.6%;

Length 3292;

0,:

```
US-09-043-303-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   οy
                                                                                                                                                                                                                                                                                                                                                                             US-09-043-303-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Homo sapiens US-09-043-303-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-043-303-12/c
                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/09043303
Patent No. 6251589
                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/09043303 Patent No. 6251589
                                                                                                           SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
 Query Match
                                                                                                                                                                                           APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and
TITLE OF INVENTION: Primers Therefor
FILE REFERENCE: 0760-0241P
CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1998-05-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1998-05-18
EARLIER APPLICATION NUMBER: PCT/JP96/01999
EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                          EARLIER APPLICATION NUMBER: PCT/JP96/01999
EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and TITLE OF INVENTION: Primers Therefor FILE REFERENCE: 0760-0241P
                                                                                                                         SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 78
                                                                                       ENGTH: 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      801 GCTGCTGCCGCCGCCGCCGTTGTTGTGGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  758 TGCTGCTGCTGCCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
les 63; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 GCTG 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.6%;
78.1%;
 3.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 42.6; DB 5;
Pred. No. 0.02;
Pred. No. 34;
 Score 41.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 41.6; DB 4
Pred. No. 0.0047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4; Length 78;
 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14;
Length 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
δÃ
                                                                                                                                              맑
                                                                                                                                                                                                                 γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TO MOLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
US-08-145-617-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Applic Patent No. 5766847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 78.3
Matches 50; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/681,494
FILING DATE: 10-JUN-1991
APPLICATION NUMBER: DE P3834636.2
FILING DATE: 11-OCT-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/145,617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 703-241-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: PROCESS FOR ANALYZING LENGTH TITLE OF INVENTION: POLYMORPHISMS IN DNA REGIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Jackle, Herbert APPLICANT: Tautz, Diethard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELLEFAX: 7 CE/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
154 TGCTGCTGCTGATGTTGCTGCTGTTG 129
                                                                   839 TGCTGCTGCCGTTGTTGTTTCTGCTG 864
                                                                                                                                              214 CCGAACTCCAGGCCTCCGAGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGT 1.55
                                                                                                                                                                                   779 CCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAAC 838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            801 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: /UJ - 703-241-2848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Svensson, Leonard R REGISTRATION NUMBER: 30,3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 301 N. Washington Street, P.O. Box CITY: Falls Church
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/08145617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       United States of America
                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BIRCH, STEWART,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                              3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               78.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30,330
ER: 147-122PCT
                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 0.0081;
0; Mismatches 14;
                                                                                                                                                                                                                                                                                                                          Score 41.2; DB Pred. No. 0.015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KOLASCH & BIRCH
                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                            28;
                                                                                                                                                                                                                                                                                                                                                            Length 379;
                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                            0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; LOCATION:
US-08-258-442-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-328-809-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 3.6
Best Local Similarity 64.9
Matches 63; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/08328809 Patent No. 5705334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                      TELEFAX: 617-248-7100 INFORMATION FOR SEQ ID NO: 7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Uses For DNA Structure-Specific TITLE OF INVENTION: Recognition Proteins NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 3292 base pairs
                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 617-248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
ORIGINAL SOURCE:
                IMMEDIATE SOURCE:
                                                  ORIGINAL SOURCE:
                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMMEDIATE SOURCE:
CLONE: lambda yPt
                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDAY
STREET: 5.
STREET: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            857 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          758 TGCTGCTGCTGCCAACTGCTGTTGTTGTTATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           818 AGATGATGTTGTTGAAGTTGTTGTTGTTGCTGCTGTTGTTGCTTGTTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             797 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCCTGCAACTGCTGCTGCCGTTGTTGT 856
                                                                                                                                                                                    TELEPHONE: 617-248-7100
                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: MI)
LECOMMUNICATION TIPE
                                    ORGANISM:
                                                                                                   STRANDEDNESS: double
                                                                                                                                                                                                                                                           NAME: Fenton, Gillian REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: U.ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Saccharomyces cerevisiae
                                                                                                                 nucleic acid
lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Essigmann, John M.
Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1..1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lippard, Stephen J.
                                Saccharomyces cerevisiae
                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent Administrator, Testa, Hurwitz & Thibeault
                                                                  DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.6%;
                                                                                                                                                                                                                                                                                                                 435
                                                                                                                                                                                                                                                                                                                                                US/08/328,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                         MIT-023 (5473/24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 42.6; DB 1; Length 3292; 
Pred. No. 0.02; 
0; Mismatches 34; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
```

```
RESULT 8
PCT-US92-11107-12/c
Sequence 12, Application PC/TUS9211107
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-328-809-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
EFILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,22
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C.
                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
LENGTH: 3292 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                 FEATURE:
                                                                                           ORIGINAL SOURCE:
                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                               IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    857 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTGTTTGCAACTGGTGTTTGCTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     758 TGCTGCTGCTGCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: P
FILING DATE: 19921218
                                                                           ORGANISM: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP:
 LOCATION:
                NAME/KEY:
                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02173
                                                                                                                                                           NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΜA
                                                lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
Pil, Pieter M.
                                                                                                                                                                                                                          617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brown, Steven
Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Essigmann, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1..1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
1..1626
                                                                                                                             linear
                                                                                                                                                                                                                                         617-861-6240
                                                                                                          DNA (genomic)
                                                                                                                                            double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.6%;
                                                                                                                                                                                                                                                                                                                                                        us 07/539,906
                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US92/11107
                                                                                                                                                                                                          12:
                                                                                                                                                                                                                                                                         MIT-4787AAA

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 42.6; DB Pred. No. 0.02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
```

TELEPHONE:

: (619) 535-9001 (619) 535-8949

```
RESULT 5
US-07-814-964-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; LOCATION: US-09-041-886-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                               INFORMATION FOR SEQ ID NO:
                                                            REFERENCE/DOCKET NUMBER: MIT-4787AAA TELECOMMUNICATION INFORMATION: TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
               SEQUENCE CHARACTERISTICS:
                                                                                                          APPLICATION NUMBER: US 07
FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
NAME: Grandhan, Patricia
REGISTRATION NUMBER: 32,7
                                                                                                                                                                                     CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           861 GCTGTAGAAGAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          915 GCTGCTGTTTTTCAAAGTAGGCTTCTCGTCTTCTCGAAGCTCTTCTGAA 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 1776 base pairs TYPE: nucleic acid STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                    APPLICATION NUMBER: US
FILING DATE: 19911226
                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                               ZIP: 02173
                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
 LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12, Application US/07814964
5. 5359047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68;
                                                                                                                                                                                                                                                                                                                                                                                       Lexington
                                                                                                                                                                                                                                                                                                                                                                          ž
3292 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                       3: Hamilton, Brook, Smith & Reynolds, P.C
2 Militia Drive
                                                                                                                                                                                                                                                                                                                                                           USA
                                                 617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Essigmann, John M.
Lippard, Stephen J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Toney, Jeffrey
Bruhn, Suzanne
Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                  PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
36..1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Donahue, Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.7%;
61.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein and Uses Therefor 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Structure Specific Recognition
                                                                                                                                                                         us 07/539,906
                                                                                                                                                                                                                                    US/07/814,964
                                                                                                          32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 42.8; DB Pred. No. 0.012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-258-442-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-07-814-964-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No. 5670621
GENERAL INFORMATION:
APPLICANT: Donahu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                    CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/539,906
FILING DATE: 18-JUN-1990
ATTORNEY/AGGNT INFORMATION:
NAME: Granahan, Patricia
                                                                                                                      REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: MIT-4787AAA
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: |
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 758 TGCTGCTGCTGCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              857 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             818 AGATGATGATGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            797 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
TOPOLOGY:
                STRANDEDNESS:
                             TYPE: nucleic acid
                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE:
                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                         ΜA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08258442
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 Militia Drive
                                           3292 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Toney, Jeffrey l
Bruhn, Suzanne l
Pil, Pieter M.
                                                                                            617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lippard, Stephen J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Essigmann, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Donahue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Saccharomyces cerevisiae
 linear
                                                                                                         617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hamilton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Structure Specific Recognition Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                 US/08/258,442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brook, Smith & Reynolds,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           r # Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 42.6; DB 1;
Pred. No. 0.02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

```
20
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                          US-08-531-927B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-531-927B-3
                                                                                                                                                                                                       Sequence 1, Application US/08531927B Patent No. 5840491 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 617-861-9540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                           TITLE OF INVENTION:
cent No. 5840491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: ATT
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
COMPUTER
                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                          ent No. 5
                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: JP H6
FILING DATE: 21-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                      904 ATCTGAAAAAGAGAAGAACAAAGAAACTGAGACAGAAAGTGGAAATGAAA 956
                                                                                                                                                                                                                                                                                                                                                                                        150 TGCTGYTGCTGTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                       845 TGCCGTTGTTGTTTCTGCTGTAGAA-GAAAAAGAGGATTTCGTATTCAAATTTCAAAAGAA 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         785 TGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTTGCGCTGCAACTGCTGC 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                           COUNTRY:
                                                                            STREET:
                                                                                                                                                                                                                                                                                                                        90 AAACTTAAAAGAATAAATACACCATGAGAAAAACTATTCATAAGGAAAATACA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: Two Mil:
CITY: Lexington
                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                 02173-4799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02173-4799
                                                           Lexington
READABLE FORM:
                                                                                                                                        INVENTION: Disease Gene and Uses Thereof
                                            Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Massachusetts
                                                                            Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325 base pairs
                                                                                                                                                                                           Kakizuka, Akira
                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                             Hamilton,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.1%;
                                                                                                                                                                  DNA Sequence Encoding the Machado-Joseph
                                                                                                                              23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JP H6-251600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/531,927B
                                                                                          Brook,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATH95-01A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 48.2; DB 2;
Pred. No. 0.00012;
                                                                                          Smith & Reynolds, P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                        91
```

```
RESULT 4
US-09-041-886-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-531-927B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: ATH9
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-861-6240
TELEPAX: 617-861-9540
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12, Application US/09041886 Patent No. 6235872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Bredes
APPLICANT: Rabiza
                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
           ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: TITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  861 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                915 GCTGCTGTTTTTCAAAGTAGGCTTCTCGTCTCTCCGAAGCTCTTCTGAA 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity hes 68; Conserv
                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                      CITY: San Diego
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 1776 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                       FILING DATE:
                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                     STATE:
                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/531,927B FILING DATE: 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE:
                                                                                                                                                                                                                                                     92122
                                                                                                                                                                                                                                                                                   California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Granahan, Patricia
                                                                                                                                                                                                                                                                                                                   E: Campbell & Flores LLP 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                   Rabizadeh,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bredesen, Dale E.
                                                                                                                                                                                                                                                                  United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-SEP-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.7%;
61.8%;
                                                                                                                                                                                                                                                                                                                                                                              Proapoptotic Peptides, Dependence Polypeptides and Methods of Use 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JP H6-251600
                                                                                                                      US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATH95-01A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 42.8; DB Pred. No. 0.012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

0,

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
   0 0 0 0 0 0 0 0 0
                                                                                                                                                                 000
                                                                                                                                                                                                                        00000000000
                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on:
    Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB DB
                                                                                                                                                                                                                                                                                                                                                                                                                    Score
   51.8
42.8
42.8
42.6
42.6
42.6
42.6
41.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Issued_Patents_NA:*
1: /cgn2_6/ptodata/1
2: /cgn2_6/ptodata/1
3: /cgn2_6/ptodata/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 5 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 agtgatcatggtggcaggag.....gtaatacaactgtagtatag 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-729-264-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                April 28, 2003, 23:25:03; Search time 48.8976 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/FCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/packfiles1.seq:*
    Length
                                203
379
3771
3771
3771
5063
6177
7257
484
2674
10348
10348
10348
10348
10348
10348
10348
                                                                                                                                                                                                                                                                     397
325
1776
1776
1776
3292
3292
3292
3292
3292
                                                                                                                                                                                                                                                                                                                                                                                                                    DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapext 1.0
                                 US-09-253-691-3
US-08-531-927B-3
US-08-531-927B-3
US-08-531-927B-1
US-09-041-886-12
US-09-041-886-12
US-08-258-442-12
US-09-043-303-7
US-09-043-303-7
US-08-185-432-3
US-08-185-432-3
US-08-185-432-3
US-08-185-432-1
US-09-091-042A-1
US-08-457-273B-41
US-08-457-273B-41
US-08-457-273B-41
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-09-041-886-14
US-08-256-8428-10
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-08-453-255-5
US-09-043-303-10
US-09-043-303-10
US-08-453-303-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (without alignments)
7325.486 Million cell updates/sec
   Sequence 1
Patent NO.
Sequence 1
Sequence 1
Sequence 1
Sequence 1
Sequence 5
Sequence 5
Sequence 5
Sequence 1
Sequence 1
Sequence 1
Sequence 6
Sequence 6
                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                            Sequence
Sequence
Sequence
                                                                                                                                                                                                                                      Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
   3, Appli
1, Appli
12, Appli
13, Appli
14, Appli
15, Appli
16, Appli
17, Appli
18, Appli
19, Appl
```

Sequence 3, Application US/08531927B
Patent No. 5840491
GENERAL INFORMATION:
APPLICANT: Kakizuka, Akira
TITLE OF INVENTION: DNA Sequence Er
TITLE OF INVENTION: Disease Gene ar
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:

Encoding the Machado-Joseph

and Uses

Thereof

ADDRESSEE:

Hamilton, Brook, Smith & Reynolds, P.C

RESULT 2 US-08-531-927B-3/c

Qy Qy Qy	75 A W	S S S		000000000000000000000000000000000000000
61 40 21 80	Query Ma Best Loc Matches	SULT 1 sequence 3, Applicat patent No. 6124100 patent No. 6124100 GENERAL INFORMATION: APPLICANT: DOR KYU TITLE OF INVENTION: FILE REFERENCE: 194 CURRENT APPLICATION CURRENT FILING DATE EARLIER FILING DATE		22266666666666666666666666666666666666
GCTGTAG CTGTTG GCTGTTG CAAACAI AACTTAJ	Match Local Sim les 89; 01 GCTGCT0	3-691-3/c ce 3, App No. 6124 L INPORMA CANT: DON OF INVEN		444444444444444444444444444444444444444
GAAGAAA 	al Similarity al Similarity 89; Conserva GCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	Č S : T : T N		
AAGAGGI TTTGCTGC TGAGACI AAATACI	4.7 58.9 vative CCGCCG	US/ gno ng 99- 96-		165 168 168 171 171 177 177 195 234 234 234 237 270 270 270 270 270 270 270 270 270 234 234 234 234 234 234 234 236 237 237 237 237 237 237 237 237 237 237
ATT	198; 98; 100; 100;	09253 Stic Trinu Trinu (1: US/ 02-22 02-22 Windo		4121212444124
GCIGITAGAAAAAAGAGAATTTCGTATTTCAAAAGAAATCTGAAAAGAGAAGAGAGAG	Score 51.8; DB 3; L Pred. No. 1.2e-05; 0; Mismatches 62; TTGTTGTGGGTGCAACTGCTGCT	Method and Kit for icleotide Repeats Se /09/253,691 2 98-6,278	ALIGNMENTS	US-09-043-303-17 US-08-469-802B-4 US-08-267-803B-5 US-08-469-802B-5 US-08-469-802B-2 US-08-469-802B-2 US-08-469-802B-3 US-08-267-803B-3 US-08-267-803B-3 US-09-146-054-8 US-08-267-803B-7 US-08-267-803B-1 US-08-320-559-29
	ength 397; Indels 0; Gaps 0 GCCGTTGTTGTTCT 860 GCTGTTGTTCT 111 1 1 1 1 1 GCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG	Neuropsychiatric Diseases quence		Sequence 17, Appli Sequence 4, Appli Sequence 5, Appli Sequence 5, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 3, Appli Sequence 8, Appli Sequence 1, Appli Sequence 7, Appli Sequence 7, Appli Sequence 5, Appli Sequence 5, Appli Sequence 5, Appli Sequence 6, Appli Sequence 6, Appli Sequence 7, Appli Sequence 7, Appli Sequence 7, Appli Sequence 1, Appli Sequence 29, Appli

				•			
•							
•							
•							
•							
*							
•		•					
		•					
				,			
	•						
			-				
		•					
		•					
		•					
		•				·	
		•					
		•					
		•					
		•					
		•					

WPI;

2000-662424/64.

is

```
RESULT 15
ABL16830
ID ABL16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                       Claim 1;
                                                                                                    WPI;
                                                                                                                                                                                                                                                                                                  Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinoubar atrophy. The present sequence represents a nucleotide sequence of the invention showing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention relates to the use of a plasmid vector array containing a neuropsychiatric gene containing trinuclectide repeats. Tri-nuclectide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebella
                                                                                                                                                                                23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                          WO200171042-A2
                                                                                                                                                                                                                                                                                                                          pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                Drosophila melanogaster genomic polynucleotide SEQ ID NO 1963.
                                                           New isolated nucleic acid
genes from Drosophila and
                                                                                                                            Venter JC, Adams M,
                                                                                                                                                      (PEKE ) PE CORP NY.
                                                                                                                                                                                                                      23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                27-SEP-2001
                                                                                                                                                                                                                                                                                                                                        Drosophila; developmental biology;
                                                                                                                                                                                                                                                                                                                                                                                            26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                     ABL16830;
                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL16830 standard; DNA; 46954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 403 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 12; 23pp; Korean.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plasmid vector arraying neuropsychiatric gene more than copy number containing trinucleotide repeats its use thereof -
                                                interactions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the CAG tri-nucleotide repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95 AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                   2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAACAAAGAAACTGAGACAGAAAGTGGAAA 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGTAGAAGAAAAGAGGATTTCGTATTCAAATTTCAAAAGAAATCTGAAAAAGGAGAAGA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9;
                    SEQ ID NO 1963; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                               2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 A; 108 C; 105 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.4%;
                                                                                                                                                                                                                                                                                                                            ds.
                                                                                                                            Ľ
                                                                                                                            PWD,
                                                           detection reagent for for elucidating cell s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 51.8; DB 21 Pred. No. 0.00036;
                                                                                                                           Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                        cell signalling;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                             c detecting signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 403;
                                                                                                                                                                                                                                                                                                                                        insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               spinocerebellar
                                                             1000
and c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                           0 or more
cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

The invention relates to an isolated nucleic acid detection reagent

```
В
                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                88888888888
Ър
                                      Qγ
                                                                                                                   ОÃ
                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                  16836 ACGATGGTGCCGATGATGTGGATGCTCTGGATGATGCTGCTGCTGCAGATGCAA 16895
16956 AAAGTTACAATTTCAAAACAAAT
                                                                                 16896
                                                                                                                                                                                                                                                                                                                                                                                                                                                 capable of detecting 1000 or more genes from Drosophila. The invent useful in developmental biology and in elucidating cell signalling the local interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL16176-ABL30511) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                  specification, but was obtained in electronic format directly from at ftp.wlpo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                              Sequence 46954 BP; 13370 A; 9970 C; 9854 G; 13760 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                               The sequence data for this patent did not form part of the printed
                                                                                                                                                                                       764 ACCATGCTTCTGACGCCGACGTGTACTCT-TACAATACGCTGCTGCTGCTGCTGCCGCCGTCG 822
                                                                                                                                                                                                                                                                                                                                                                                                                                    (ABB57737-ABB72072)
                                                                                                                       823 TTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATT 882
                                                                                 TTGCTGCCGCTGCTGCTGCTGCTGCTGCTGCAGTTGCGGATGCGGATGAGTGCA 16955
                                      TCGTATTCAATTTCAAAAGAAAT
                                                                                                                                                                                                                                                 91;
                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                  4.2%;
                                                                                                                                                                                                                                                 0;
16978
                                        905
                                                                                                                                                                                                                                                                  Score 49.4; DB Pred. No. 0.021;
                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                   DB 23;
                                                                                                                                                                                                                                                 51;
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                       Length 46954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention signalling and
                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                              WIPO
```

1.

Search completed: April 29, 2003, 11:05:24 Job time: 342.628 secs

0,

```
Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  x33333333333XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
AAX89891/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion are known to be involved in a number of diseases including fragile x syndrome, spinocerebellar ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinoubar atrophy. The present sequence represents a tri-nucleotide repeat related sequence #5 disclosed in the scope
                    Diagnosis of spinocerebellar ataxia type III (SCA III) syndrome
                                                                                                                                                                                                                                                                                                                                                                                                      Spinocerebellar ataxia type III; SCAIII; reverse dot hybridisation; PCR-microplate hybridisation; PCR-MPH; trinucleotide repeat; TNR;
        using techniques which ensure highly accurate diagnosis
                                                   WPI; 1999-527634/44
                                                                                                                        (JIND/) JIN D K.
                                                                                                                                                    26-FEB-1998;
                                                                                                                                                                                18-FEB-1999;
                                                                                                                                                                                                            02-SEP-1999.
                                                                                                                                                                                                                                        W09943852-A1
                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                           SCAIII syndrome; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Spinocerebellar ataxia type III (SCAIII) gene fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX89891 standard; DNA; 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 389 BP; 107 A; 92 C; 91 G; 93 T; 6 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        been represented by an n to keep nucleotide numbering
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Note; Nucleotides which were illegible in the specification have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This invention relates to the use of a plasmid vector array
                                                                                                         (SMSU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 921 CAAACAAAGAAACTGAGACAGAAAGTGGAAATGAA 955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     861 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAGAAGA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  801 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58 AANTTAAAAGAANACCTACACCATGAGNTANAAAA 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGTTGCTGCTGTGTGTGAAACATTCAAAAGTGAAGTATATTTAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
89; Conserv
                                                                                                           SAMSUNG FINE CHEM CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                    98KR-0006278.
                                                                                                                                                                                99WO-KR00078.
                                                                                                                                                                                                                                                                                             /*tag= 8
                                                                                                                                                                                                                                                               /note= "trinucleotide repeat"
                                                                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
137..355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.48;
                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ыв 21;
n.00035;
rs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         correct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
ABK10240/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to the diagnosis of spinocerebellar ataxia type III (SCAIII) syndrome using reverse dot hybridisation or PCR-microplate hybridisation (PCR-MPH). The method comprises attaching a potion of the SCAIII gene containing 73 copies of the trinucleotide (CAG) repeat unit (the present sequence) to a substrate, and hybridising with amplified testee genomic DNA containing copies of the trinucleotide units, PCR amplified with labeled primers (AAX89889-90). The new method is useful for diagnosis of SCAIII syndrome, and for determining the severity of the disease. The present sequence represents the SCAIII gene fragment containing 73 trinucleotide (TNR) repeats.
                                                                                                                                                                                                                                                                                                                                                                        spinocerebellar ataxia type III; DRPLA; neuropsychia hereditary hypertrophic cardiomyopathy; Marfan syndy dentatorubral and pallidoluysian atrophy; spinocerebellar ataxia; X-linked spinobubar atrophy.
Jin DG
                            (SMSU ) SAMSUNG MEDICAL CENT (JIND/) JIN D G.
                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Trinucleotide repeat sequence #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK10240 standard; DNA; 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 12-13; 28pp; English.
                                                                      25-JUN-1998;
                                                                                                    25-JUN-1998;
                                                                                                                                    15-JAN-2000
                                                                                                                                                                KR2000003004-A
                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                        repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                     Trinucleotice repeat; fragile X syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                921 CAAACAAAGAAACTGAGACAGAAAGTGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          861 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAAGA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80 AACTTAAAAGAATAAATACACCATGAGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
89; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP; 124 A; 104 C; 104 G; 65 T; 0 other;
                                                                        98KR-0024064
                                                                                                      98KR-0024064.
                                                                                                                                                                                                                                                                                                  Location/Qualifiers 152..347
                                                                                                                                                                                                                                                      /rpt_type=
152..154
                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.4%;
                                                                                                                                                                                                                          "CAG type repeat"
                                                                                                                                                                                                                                          р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                      TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 51.8; DB 20; Pred. No. 0.00035; 0; Mismatches 62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 951
                                                                                                                                                                                                                                                                                                                                                                                                                        neuropsychiatric;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
```

0;

```
RESULT 11
ABL29756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents a nucleotide sequence of the invention showing the the CAG tri-nucleotide repeats.
                                                                useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLG1840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Drosophila; developmental biology; cell signalling; insecticide;
pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila melanogaster genomic polynucleotide SEQ ID NO 40741.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABL29756;
                                                                                                                                                   The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invent
                                                                                                                                                                                           Claim 1; SEQ ID NO 40741; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                    New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                       Venter JC,
                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                     23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABL29756 standard; DNA; 7029
                                         The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                                                                                                                  (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95
                         ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                            2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAACAAAGAAACTGAGACAGAAAGTGGAAA 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGTTGCTGCTGTCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                       Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP;
                                                                                                                                                                                                                                                                                                                                                             2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80 A; 66 C; 62 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.6%;
                                                                                                                                                                                                                                                                                                       Li PWD,
                                                                                                                                                                                                                                    detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 53.4; D: Pred. No. 0.00 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΒP
                                                                                                                                                                                                                                                                                                       Myers EW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.00011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277;
                                                                                                                                                     The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                     cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96
                                          WIPO
                                                                                                                                       and
                                                                                                                                                     Į,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Sequence 7029 BP; 1426 A; 1440 C; 1945 G; 2218 T; 0 other;

Disclosure; Fig 10; 23pp; Korean

```
RESULT 12
ABK10248/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
72; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
5560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5500
                                                                                                                                                                                                                                                                                                                                                                       Trinucleotide repeat; fragile X syndrome; ds; spinocerebellar ataxia type III; DRPLA; neuropsychiatric hereditary hypertrophic cardiomyopathy; Marfan syndrome; dentatorubral and pallidoluysian atrophy; spinocerebellar ataxia; X-linked spinobubar atrophy.
                                                                                                                                                                                                    misc_difference
                                                                                                                                                                                                                               misc_difference
                                                                                                                                                                                                                                                       misc_difference
                                                                                                                                                                                                                                                                                misc_difference
                                                                                                                                                                                                                                                                                                                                                        Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                          Tri-nucleotide repeat related sequence #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK10248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK10248 standard; DNA; 389
                                                                         (SMSU)
                                                                                                                                                                                                                                                                                                        misc_difference
                                                                                                                                                                                                                                                                                                                                 misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAY-2002 (first entry)
              Plasmid vector arraying neuropsychiatric containing trinucleotide repeats its use
                                        WPI; 2000-662424/64
                                                        Jin DG;
                                                                                                  25-JUN-1998;
                                                                                                                                   15-JAN-2000
                                                                                                                                                    KR2000003004-A
                                                                                                                  25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              801 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    861 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAA 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGTATTTGCTAAAAAGAAGTAATCATTAATTTCCGGTAAAAA 5603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAMSUNG MEDICAL CENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                       /note=
                                                                                                  98KR-0024064
                                                                                                                   98KR-0024064
                                                                                                                                                                                                                               /note=
203
                                                                                                                                                                                                                                                        56
                                                                                                                                                                                                                                                                                46
                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                      /note=
276
                                                                                                                                                                                                                                                                                      /note-
                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                     /note=
                                                                                                                                                                                               *tag=
                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.5%;
                                                                                                                                                                                                      e "Illegible
                                                                                                                                                                                                                                                                                                          a
"Illegible in
                                                                                                                                                                                     "Illegible
                                                                                                                                                                                                                                                              "Illegible
                                                                                                                                                                                                                                                                                        "Illegible in
                                                                                                                                                                                                                                       "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 52.8; DB 23
Pred. No. 0.00086;
                                                                                                                                                                                     in
                                                                                                                                                                                                              in
                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                                in
                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                      the
                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                 neuropsychiatric;
               gene more
thereof -
                                                                                                                                                                                      specification"
                                                                                                                                                                                                                                                                                                                specification"
                                                                                                                                                                                                              specification"
                                                                                                                                                                                                                                       specification"
                                                                                                                                                                                                                                                               specification"
                                                                                                                                                                                                                                                                                        specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                       than copy number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
В
                                        QY
                                                                                          В
                                                                                                                                δÃ
                                                                                                                                                                                  밁
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer; lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L player and the protein and proliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and prollferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                        pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of mouse B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful for enhancing the immune response to tumours. (I) plays a growth and maintenance of cancer cells based on the observation {\sf cancer}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 molecules are useful for alleviating the symptoms associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AMGE-) AMGEN INC
228
                                                                                          168
                                                                                                                                       102
                                                                                                                                                                                  108
                                                                                                                                                                                                            42 CCGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                               Local Similarity
    TTAACCAAATGGTGGTGCTGAGTCTCACCACCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002-130881/17.
                                          TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                          ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                     GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                  CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU75545.
                                                                                                                                                                                                                                                                                                                                                               895 BP; 250
                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarmiento
                                                                                                                                                                                                                                                                                          15.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                               A; 223 C; 212 G; 210 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schultz HJ, Chute HT,
                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                               Score 181.8;
Pred. No. 3.
                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                               .6e-40
                                                                                                                                                                                                                                                                                                                  DB 24; Length 895;
                                                                                                                                                                                                                                                                          87;
                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (I) plays a role
                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                  167
                                             221
                                                                                          227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ဝ္ဂ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ij
                                                                                                                                                                                                                                                                          0;
```

```
RESULT 10
ABK10239/c
                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
PF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Trinucleotide repeat; fragile X syndrome; ds; DRPLA; spinocerebellar ataxia type III; Marfan syndrome; hereditary hypertrophic cardiomyopathy; neuropsychiatric; dentatorubral and pallidoluysian atrophy; spinocerebellar ataxia; X-linked spinobubar atrophy.
         This invention relates to the use of a plasmid vector array containing a neuropsychiatric gene containing trinucleotide repeats. Trinucleotide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebella
                                                                                              Plasmid vector arraying neuropsychiatric gene more than containing trinucleotide repeats its use thereof \boldsymbol{\cdot}
                                                                                                                                                              Jin DG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trinucleotide repeat sequence #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK10239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK10239 standard;
                                                                     Disclosure; Page 12;
                                                                                                                                     WPI; 2000-662424/64.
                                                                                                                                                                                    (SMSU ) SAMSUNG MEDICAL CENT (JIND/) JIN D G.
                                                                                                                                                                                                                          25-JUN-1998;
                                                                                                                                                                                                                                                   25-JUN-1998;
                                                                                                                                                                                                                                                                                                    KR2000003004-A
                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                          98KR-0024064.
                                                                                                                                                                                                                                                   98KR-0024064.
                                                                                                                                                                                                                                                                                                                                                                               /rpt_type=
198..200
                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "CAG type repeat" 198. 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type=
152..154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers 152..194
                                                                                                                                                                                                                                                                                                                                                     /note= "CAG type repeat"
                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag=
hereditary hypertrophic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                        23pp; Korean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۵
                                                                                                                                                                                                                                                                                                                                                                   ь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                            TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TANDEM
cardiomyopathy, dentatorubral
           spinocerebellar
                                                                                                            copy number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
```

```
RESULT 8
ABK13034
ID ABK1
useful for enhancing the immune response to tumours. (1) plays a role in growth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                  autoLumune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders of conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are extracellular domains and other regulators of B7-L polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive discorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                  Grave's disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Fig 7; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AMGE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABK13034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK13034 standard; cDNA; 754 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B7-like polypeptides, polynucleotides and their modulators, useful diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encoding mouse B7-like protein, B7-L_m3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-214512P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 53..724
              Hashimoto's thyroiditis and diabetes mellitus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag=  a
/product= "B7-like protein, B7-L_m3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ, Chute HT;
              They
                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                     are
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABK13033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
                                                                                                                                                                                                           reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                    Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antireter; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiathetic; nephrotropic; antibacterial; virucide; tumour; cancer; antiathetic; nephrotropic; antibacterial; virucide; tumour; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculiopathies, coellac disease, anaemia, thrombocytopenias, Guilliain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of mouse B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transplantation or to prolong graft survival B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including atteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, personatties (e.g. glomerilonephritis), skin disorders (pemphigus and personatties (e.g. glomerilonephritis), skin disorders (pemphigus and personatties).
                                    WO200200710-A2
                                                                                                                                                                          Mus musculus.
                                                                                                                                                                                                                                                                                                                            Mouse; B7-like protein; antitumour; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding mouse B7-like protein, B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK13033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABK13033 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42 CCGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCCTTCCTCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       754 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                 53..865
                                                                         /product= "B7-like protein, B7-L_m2"
                                                                                               /*tag=
                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       220 A; 191 C; 175 G; 168 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA; 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 181.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .3e-40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               347
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
      1059
                                                                                                                                                                  945
                                                                                                                                                                                                                                                                                                                                                                                                        792
                                                                                                                                                                                                                                                                                                                                                                                                                                             762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42
TTCCTTATCAGGAACTCAATAAACATCAGCCCGGTCCAGCAACTCATCCACGGGTTTCCT 1118
                                       CTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTT 1121
                                                                                                      CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCC
                                                                               CTCTCCCTAAATCTGCTGAAGTCAGCCTTCCAGAAAAACGCAGCAGTA-----GCC
                                                                                                                                                            AAAGTGGAAAAGGAAAACTACGGGTACAGTTCGGATGAGGCAAAGGCTGCACAGACTGCAT
                                                                                                                                                                                                    AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTT 1001
                                                                                                                                                                                                                                                                               GTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                    TTTCCTTGCTCTTGATCCTGATCATTGTTTTGATTATATATTCTGTTGCTG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTTACCGAGTTTTAGGTTTTTCATTGCCTACTTGGGCCAAAGTTGGACTTGGACTAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAA 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATATTTCCTGGGAGCTTGAGGTTCCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGCTGAGAATGAACCTTGTGAAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                         TCTGCAAACATGAGGACAA------ACAAAGCAGATCCGGAGACAAAGTTAA
                                                                                                                                                                                                                                                                                                                       ----TTGTGCCTCCAGGAGAAAAAGGAAGAATCTACTTATCAAAATGAAATAAGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGTGGTTCAGCCTCCACCTGACAGTATTGGAGAGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCCAGCAAGTCCTTAACTGTCAACCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACACCACTGGGCAACGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCTTCCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTCCCAGGCTCCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                       898
                                                                               1058
                                                                                                                      1061
                                                                                                                                                            1004
                                                                                                                                                                                                                                                                                 941
                                                                                                                                                                                                                                                                                                                                                                                                    843
                                                                                                                                                                                                                                                                                                                                                                                                                                         821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       227
```

β

밁

Ş

Ş

Š

Š

밁 Ωy

В Ş 멍 δÃ В Ş В Qy В Qy 밁 Q 밁 Qy

```
밁
                    Ş
                                                               Qy
                                                                                          DЪ
                                                                                                              Qγ
                                                                                                                                                                                                                                 RESULT 7
AAI36582
ID AAI3
                                             DЬ
                                                                                                                                       망
                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                     Matches
                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                   The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1119
                                                                                                                                                                                                                                Sequence 401 BP; 105 A; 98 C; 111 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Probe; microarray;
genetic disorder; s
                                                                                                                                                                                                                                                                                                                                                             Human genome-derived single exon nucleic acid probes useful
                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-488897/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                 (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200157272-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAI36582 standard; DNA; 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Probe #5268 used to measure gene expression in human placenta
 374
                                                                   147
                                                                                           254
                                                                                                                                        194
                                                                                                                 87
                                                                                                                                                             27 AAAATAGAGACCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATG
                                                                                                                                                                                               Local Similarity
TCACCAATGACCGCTTCACCTCTCAGAG
                                                                                                                                       AAATTGGCTACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATG
                                           TCATCATGTGGGCTCTCAGTGACATGGTGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCA 206
                                                                                                   CAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACCAATGACCGCTTCACCTCTCAGAG
                                                                                        CAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                             SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                 gene expression in human placenta
                                                                                                                                                                                                                                                                                                                          SEQ ID No 5268; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                           Hanzel DK,
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-0180312.
2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-0234687.
2000US-0236359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001WO-US00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000GB-0024263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human; placenta; antenatal diagnosis;
                                                                                                                                                                                              16.8%;
                                                                                                                                                                                                                                                                                                                                                                                                           Chen W,
                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                              Score 196.8; DB 2
Pred. No. 1.6e-44;
                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                           Rank DR
                     234
401
                                                                                                                                                                                                       DB 22;
                                                                                                                                                                                    7; Indels
                                                                                                                                                                                                         Length
                                                                                                                                                                                                          401;
                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sample.
                                                                                                                                                                                   Gaps
                                             373
                                                                                                                                       253
                                                                                          313
                                                                                                                146
                                                                                                                                                             98
                                                                                                                                                                                    0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
antiasthmatic; nephrotropic; antibacterial; virucide; tumour;
reproductive disorder; graft versus host disease; autoimmune
toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                 Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                                                                                                                                                                                                                                                                                                                 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                   1002
                                                                                                                                        DNA encoding mouse B7-like protein, B7-L_m1.
                                                                                                                                                                          23-APR-2002
                                                                                                                                                                                                                                              ABK13032 standard; cDNA; 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     632
                                                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGGCGTCATTTTGTGTATACTCATTTATGTCTGCCTTCTTGAGCCTCTCACTGTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTGTTTCTGCTGTAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTT
                                                                                                                                                                                                                                                                                                                                                                CTCCTCACCAGCGGGCTGATCAACGT 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAGAGGATTTCGTATTC----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTTTACAATACGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTATTATCAAGTTTACCGAGTTTAGGTTTTCATTGCCTACTTGGGGGCAAAGTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTATTATCAAGTTTACCGAGTTTAGGTTTTCATTGCCTACTTGGGGGCAAAGTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTCACCAGAGAAGACATAGACCT 1046
                                                                                                                                                                                                                                                                                                                                                                                                   CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----AATTTCAAAAGAAATCTGAAAAAGAGAGAGACAAACAAAGAAACTGAGACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGA
                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                              ВP
                                                                                       antirheumatic;
                     disease;
                                                                                                                                                                                                                                                                                                                                                                                                     1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1001
                                                                                                                                                                                                                                                                                                                                                                                                                                     1061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         571
```

δÃ

Ş

δÃ

Š В δÃ 밁 Š

```
The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricsis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of seminal vesicle hyperplasia in transcent.
                                                                                                            are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosslerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia,
                                                                                                                                                                                                                                                                                                                                            autoimmune diseases such as systemic lugus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  endocrinopathy; lymphoproliferative disorder; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Fig 5; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P-PSDB; AAU75544.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus.
                                        thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of mouse B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000; 2000US-214512P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 53..1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag=  a
/product= "B7-like protein, B7-L_ml"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SS
```

Matches 701; Query Match Best Local :

Similarity

32.4%;

Pred. No. 8e-95 Score 378.4; Mismatches

BP; 313 A; 304 C;

291 G;

287 T; 0 other;

DB 24;

Length 1195;

69;

Gaps

4;

Conservative

```
AAS92356
ID AAS9
XX
AC AAS9
XT
DT 13-E
XX
DE DNA
                                                                                                                                                                              밁
                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                       γ
                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                   RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                              1119
               DNA encoding
                                           13-FEB-2002
                                                                                                                                                                                                                                                                                                                               1028
                                                                                                    AAS92356 standard; cDNA; 1392
                                                                                                                                                                                                                                                                                                  999
                                                                                                                                                                                                                                                                                                                                                             939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGC
                                                                                                                                                                                                                                                  CCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTAATCTGGCCAGTCCTGAGAAGGTC
                                                                                                                                                                                                                                                                                                              AGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGT 1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTCTTACAATACGCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGCTGCTTGTACAATACGCTGCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCCAACTGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTAATACAACTGTAGTATA 1138
                                                                                                                                                                                                        AGTAATACAACTGTAGTATA 1167
                                                                                                                                                                                                                                                                                                                                                         AATTCAGATGAACAAAAGACCACAGACACCGCTTCTCCCCTCCCAAATCCTGTGAATCC
                                                                                                                                                                                                                                                                                                                                                                                     AATTCAGATGAACAAAAGACCACAGACACCGCTTCTCTCCCCCAAATCCTGTGAATCC
                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAAAGAGAAACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAAAAGAGAAGAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTTGTTGTTTCTGCTGTAGAAGAAAAGAG-------GAAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGTTGTTGTTTCTGCTGTAGAAGAAAAAGGGATTTCGTATTCAAATTTCAAAAGAAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCCAAGACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTTGTCTACCCTCACACTGGACCTGGCTCCCGGATATTTCCTTGGGAGCTCGGTCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTT 427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTACCGTCCAAGTTATG
                                                                                                                                                                                                                                                                                               AGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTÇCCCAAGACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTTGTCTACCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGAACCTCACCTCGGAGATGATCCACCAATGTGGAGCCCAGTGATTCGGGGGAACATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTACCGTCCAAGTTATG
            novel human diagnostic protein #28160
                                           (first entry)
                                                                                                                                                                                                                                                                 1147
                                                                                                                                                                                                                                                                                               1058
                                                                                                                                                                                                                                                                                                                                                         998
                                                                                                                                                                                                                                                                                                                                                                                                                    938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
```

Qγ 밁 δÃ B Qy В Qy DЬ

AATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACC

CTGCATGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTT

ATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC ATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC AATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC

180 391

331

CTGCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTT

240

121

212

AATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC

ATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACC

60

211

271

Н

Best Loc Matches

Local Similarity mes 912; Conserv

Conservative

0;

Indels 110; Gaps

```
CC The invention relates to isolated polynucleotide (I) and CC polymeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CPR polynucleotides are also used in diagnostics as expressed sequence tags. CC for identifying expressed genes. (I) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as CC a food supplement. (II) and its binding partners are useful in medical inaging of sites expressing (II). (I) and (II) are useful for treating CC imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC The polypeptide and polynucleotide sequences have applications in CC responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of the invention.

CC The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO CC at ftp. wipo.int/pub/published_pct_sequences.
                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutatio responsible for genetic disorders or other traits and to assess biodiversity
                                                                                      Sequence 1392 BP; 338 A; 361 C; 341 G; 352 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID No 28160; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W0200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABG28169.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0540217.
2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001WO-US08631.
                      66.6%;
87.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YT
Score 777.6; DB 23; Length 1392;
Pred. No. 6.8e-206;
0; Mismatches 24; Indels 110;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mutations
o assess
```

```
RESULT 4
ABK13031
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                            Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antihiflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1006
             28-JUN-2000;
28-NOV-2000;
                                                       28-JUN-2001;
                                                                                                                  WO200200710-A2
                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABK13031 standard; cDNA; 1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      754
                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACA 1113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTGTTTCTGCTGTAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACCGCTTCTCCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAAGAAGAAGAACAAAGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA
             2000US-214512P.
2000US-0729264.
                                                         2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                             human B7-like protein, B7-L_h4:
                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                          Location/Qualifiers
1..1134
                                                                                                                                             /*tag=  a
/product= "B7-like protein, B7-L_h4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765
```

```
cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L cancer including seminal vesicle cancer. Jung, brain, breast, ovarian, cancer including seminal vesicle cancer. Jung, brain, breast, ovarian, cc testicular cancer and cancers of haematopoietic systems. B7-L polypeptide cc pathway can be manipulated to regulate cytotoxic T-lymphocyte response ci n allograft transplantation, graft versus host disease, T-cell cell mediated diseases and autoimmune diseases. B7-L cc molecules are useful for alleviating the symptoms associated with cc diseases involving chronic immune cell dysfunction or to treat cantoitism, and psoriasis, chronic inflammatory disease such as systemic lupus erythematosus, rheumatoid carthritis, multiple sclerosis, diabetes, immune thrombocytopenic ci inflammatory bowel disease (crohn's disease and ulcerative colitis), cc Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ cu seful for diagnosis and treatment of diseases involving abnormal cell consists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of alleviation and for alleviation and for treatment of alleviat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The polypeptide, polynucleotide encoding it and antibody against (I) a useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                           treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                          sequence represents the coding sequence of human B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      invention relates to an isolated B7-like (B7-L) polypeptide (I). polypeptide, polynucleotide encoding it and antibody against (I) ful for treating B7-like polypeptide-related disease, disorders o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schultz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΗJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in
```

Sequence 1139 BP; 290 A; 300 Ç 283 G; 266 T; 0 other;

Query Match Best Local

Similarity

94.48; 97.98;

Score 1102.8; Pred. No. 1.9

.9e-296;

DB 24; Length 1139;

밁 δõ 밁 δÃ Вb Qy 망 ρ Matches 248 181 188 121 128 61 8 œ ATGGTGGCAGGAGCCATGGAAAATAGAGACCCACCCGGTTCTGGGTCTGGTAATGAAGTC 67 1136; GGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATC AGGCCCATGGAGCCCATCACCCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGC AGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGC GTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTC GTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTC ATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACC ATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCCAGGCTCGCTTCAACTGCACC 127 ATGGTGGCAGGAGCCATGGAAAATAGAGACCCACCCGGTTCTGGGTCTGGTAATGAAGTC 60 Conservative 0, Mismatches 2 Indels 22; Gaps 187 180 1;

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK13030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) as useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                           New B7-like polypeptides, polynucleotides and their modulators, of diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyrold; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                   Claim 1; Fig 3; 135pp; English.
                                                                                                                                                                                                                                                                                                            WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                           Welcher AA, Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                              (AMGE-) AMGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W0200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA encoding human B7-like protein, B7-L_h3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABK13030 standard; cDNA; 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC 1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTTCTCTCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCTTCTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG 1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TICTITIAATCIGGCCAGTCCIGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                                                                                                                                                                                                                                                              AAU75542.
                                                                                                                                                                                                                                                                                                                                                                                                                 2000US-214512P.
2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
80..1240
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product= "B7-like protein, B7-L_h3"
                                                                                                                                                                                                                                                                                                                                           Schultz HJ,
                                                                                                                                                                                                                                                                                                                                           Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1003
                                                                                                                              are
```

```
66666666666666666666666666666666666888
                                                                                                                                                                                                                                                          diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for disposis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfissions, and for
                                                                      treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypepti pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                  sequence represents the coding sequence of human B7-L_h3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    molecules are useful for alleviating the symptoms associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B7-L polypeptide
```

Sequence 1240 BP; 318 A; 319 C; 305 G; 298 T; 0 other;

Score 1119;

DB 24;

Length 1240;

Local

Similarity

Дb Q 밁 QУ 밁 Qy DЬ QΨ 밁 Qy Вb 밁 δÃ δÃ В Ş 뫄 δõ Matches 1125; 454 526 466 394 406 334 346 274 CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT 286 214 226 154 166 106 34 AGACCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGT 93 94 TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCGAA TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCG TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAA GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTG GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAA GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCCATCATCACCAA CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT AGAAGCTGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165 Conservative 95.8%; 99.1%; 0; Pred. No. Mismatches 6.1e-301; 10; Indels 0; 633 645 585 453 465 405 225

```
antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiltumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antifiammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of seminal vestcle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vestcle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA encoding human B7-like protein, B7-L_hl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002
                                           are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allerny aethems and known account treatment of allerny account treatment account to the supplier treatment of allerny account treatment account to the supplier treatment of allerny account to the supplier treatment account to the supplier treatment account to the supplier treatment account to the supplier to the supplier to the supplier treatment account to the supplier 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Welcher AA, Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                        arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                  dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New B7-like polypeptides, polynucleotides and their modulators,
nephropathies (e.g. glomerulonephritis), skin disorders
                              treatment of allergy, asthma and hypersensitivity reactions
                                                                                                                                                                                                                                                                                                                                                                                    autoimmune diseases such as systemic lupus erythematosus, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferative disorders. Antibodies, soluble proteins comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention relates to an isolated B7-like (B7-L) polypeptide (I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B7-like protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lypeptide, polynucleotide encoding it and antibody against (I) for treating B7-like polypeptide related disease, disorders of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU75540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 27..1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/product= "B7-like protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B7-L; antiinfertility;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B7-L_h1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gynaecological;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      are
```

```
88888%&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
Ş
                                   밁
                                                                   δÃ
                                                                                                          밁
                                                                                                                                          Ωy
                                                                                                                                                                                Вþ
                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 1126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pemphigoid), endocrinopathies (Grave's disease), various pneumopat (extrinsic alveolitis), vasculopathies, coellac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myvasthenia gravis, lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1175 BP; 295 A; 307°C; 286 G; 287 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       157
                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                              637
                                                                                                                                                                                                                                                                                                                                                                                                  584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            284
                                                                                                                                                                                                                                                       704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37 CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCT 96
                                                                                                                                                                                  764
                                                                                                                                                                                                                   757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGGGCTCCCAGGCTCGAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA 216
GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                     ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                GACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                     CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAAG
                                                                                                                                                                                AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG 823
                                                                                                                                                                                                                AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG 816
                                                                                                                                                                                                                                                                                       ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT 756
                                                                                                                                                                                                                                                                                                                            TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                            TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT 696
                                     CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.1%;
99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1122.4; DB 2
Pred. No. 6.8e-302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 24; Length 1175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     various pneumopathies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                       643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    336
                                                                                                                                                                                                                                                                                                                                    703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                     876
                                                                                                                                                                                                                                                              763
                                            943
```

28-JUN-2000; 2000US-214512P 28-NOV-2000; 2000US-0729264

```
Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 1168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (1) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytoxxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory disease, such as clerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory disease, such as inflammatory disease, Hashamoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polypucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (crave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New B7-like polypeptides, polynucleotides and their modulators, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Welcher AA,
                                      181
                                                                                                          121
                                                                                                                                                                                  121
                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
AAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGA
                                                                                                                                                                                                                                                                                                                           TGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-130881/17.
                                                                                                          CTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCT
                                                                                                                                                                                  CTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCT
                                                                                                                                                                                                                                                       TGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGGCTCCCAGGCTCGCTTCAA
                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.:; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             288 G; 279 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1e-314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 24; Length 1168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                  240
                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

Ş

4d 4d 64

д 9

B

ABK13028 ID ABK1

ABK13028 standard; cDNA; 1175

ВP

XXX

ABK13028;

```
, Qy
                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
В
                                                                B
                                                                                           Q
                                                                                                                                B
                                                                                                                                                             Qy
                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                ΩV
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
1141
                                                                                                                                1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                961
                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                  841
                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
GAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                   GACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTG
                                                                                                                                                                                                                                                                  GAAATCTGAAAAAGAGAAGAACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTC
                                                                                                                                                                                                                                                                                                   GAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTC
                                                                                                                                                                                                                                                                                                                                    CTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAA
                                                                                                                                                                                                                                                                                                                                                    CTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGGATATTTCCTGGGAGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTACCGTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCGTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGGGGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGA
                               GAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                               TCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTAATCTGGCCAGTCCTGA
                                                                                                                                               TGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGA
                                                                                                                                                                                                CGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCTCCCCCAAATCCTG
                                                                                                                                                                                                                                                                                                                                                                                                  GACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTCTGACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTCTGACGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGGATATTTCCTGGGAGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTG
                                                                TCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCTGA
                                                                                                                                TGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGA
1168
                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                     900
                                                                                                                                                                                                                                                                                                                                                                                                  84 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   780
```

```
OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of hits satisfying chosen parameters:
             N_Geneseq_101002:*
1: /SIDS2/gcgdata/g
2: /SIDS2/gcgdata/g
3: /SIDS2/gcgdata/g
4: /SIDS2/gcgdata/g
5: /SIDS2/gcgdata/g
6: /SIDS2/gcgdata/g
6: /SIDS2/gcgdata/g
7: /SIDS2/gcgdata/g
8: /SIDS2/gcgdata/g
9: /SIDS2/gcgdata/g
11: /SIDS2/gcgdata/g
10: /SIDS2/gcgdata/g
11: /SIDS2/gcgdata/
11: /SIDS2/gcgdata/
11: /SIDS2/gcgdata/
11: /SIDS2/gcgdata/
11: /SIDS2/gcgdata/
11: /SIDS2/gcgdata/
13: /SIDS2/gcgdata/
14: /SIDS2/gcgdata/
15: /SIDS2/gcgdata/
16: /SIDS2/gcgdata/
17: /SIDS2/gcgdata/
18: /SIDS2/gcgdata/
20: /SIDS2/gcgdata/
21: /SIDS2/gcgdata/
21: /SIDS2/gcgdata/
22: /SIDS2/gcgdata/
23: /SIDS2/gcgdata/
23: /SIDS2/gcgdata/
24: /SIDS2/gcgdata/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-729-264-3
1168
1 agtgatcatggtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           April 28, 2003, 23:25:03; Search time 282.628 Seconds
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA198.DAT:*
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA198.DAT:*
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA199.DAT:*
| SIDS2/gcgdata/geneseq/geneseqn-embl/NA2001.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agtgatcatggtggcaggag.....gtaatacaactgtagtatag 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-embl/Na1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/Na1981.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
9306.701 Million cell updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

9	80	7	6	cs.	4	ω	2	1	Result No.
181.8	181.8	196.8	378.4	777.6	1102.8	1119	1122.4	1168	Score
15.6	15.6	16.8	32.4	66.6	94.4	95.8	96.1	100.0	Query Match
895	754	401	1195	1392	1139	1240	1175	1168	Query Match Length DB
24	24	22	24	23	24	24	24	24	DB :
ABK13033	ABK13034	AAI36582	ABK13032	AAS92356	ABK13031	ABK13030	ABK13028	ABK13029	ID
DNA encoding mouse	DNA encoding mouse	Probe #5268 used t	DNA encoding mouse	DNA encoding novel	DNA encoding human	DNA encoding human	DNA encoding human	DNA encoding human	Description

Trinuclectide: Drosphila mela Rat androgen rr Rat androgen ra Rat androgen re Human TGF-beta Drosophila mela	ABL24483 ABL16097 ABL16097 ABL16096 ABL24570 ABL24570 ABL25657 ABL2565444 ABL25652 ABL29755 ABL26941 ABL26941 ABL26941 ABL26941 ABL08977 ABL03190 ABL031910	322222222222222222222222222222222222222	2002 8821 1509 3884 3042 3135 5215 5215 5447 5397 462 2210 3210 3210 3624 1310		444444 0.000000000000000000000000000000	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Trinucleot Drosophile Rat androg Human pros Mouse brail Drosophile	544466644 5009664546009666666666666666666666666666		11509 12509 130884 130884 13088 1308			2 C C C C C C C C C C C C C C C C C C C
Trinucleot Drosophila Rat androg Human pros Mouse brai Drosophila	44466644466666666666666666666666666666		1509 1509 1509 1509 31042 31042 3115 5215 5397 2116 2216 2216 3210 3210			2 C C C C C C C C C C C C C C C C C C C
Trinucleot Drosophila Rat androg Human pros Mouse brai Drosophila	31994457		1509 1509 3884 3042 3135 5215 5447 5397 5397 2116 2216 3210		555555555555555555555555555555555555555	33333333333333333333333333333333333333
Trinucleot Drosophila Rat andros Full-lengt Rat andros Human pros Mouse brai Drosophila	836995854466944 83699544547099 8494455474	222222222222222	8821 1509 3884 3042 3135 5215 5215 5397 5397 5397 5397 5397 5397 5397		444	33333333333333333333333333333333333333
Trinucleot Drosophila Rat androg Full-lengt Rat ardrog Human prosophila Drosophila	44005865844600844600844600844600844600844600844600846008460086600866666666	300000000000000000000000000000000000000	2002 8821 1509 3884 3042 3135 5215 5447 5397 462 2115		444	37 d d d d d d d d d d d d d d d d d d d
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Mouse brai Drosophila	64000000000000000000000000000000000000	300000000000000000000000000000000000000	2002 8821 1509 3884 3042 3135 5215 5215 5397 462 2115		44	33333333333333333333333333333333333333
Trinucleot Drosophila Rat androg Human prosophila Drosophila	6956564466644 69564559966644 6975454779986	300000000000000000000000000000000000000	2002 8821 1509 3884 3042 3135 5215 5215 5447 5397		<u>*</u>	332109870 3543210987
Trinucleot Drosophila Rat androg Full-lengt Rat ardrog Human pros Human pros Human pros Human rop- Drosophila	9564456644 956445669 97644577	2222222222	2002 18821 1509 3884 3042 3135 5215 5447			34 34
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Mouse brail Drosophila Human TGF Drosophila	56446664466644666644666666666666666666	22222222	2002 8821 1509 3884 3042 3135 5215			27 28 30 31 32
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human prosophila Drosophila	858446644 609 6457 6444	2222222	2002 8821 1509 3884 3042 3135 5215		$\sigma \sigma $	31 32 32
Trinucleot Drosophila Rat androg Full-lengt Rat ardrog Full-lengt Rat ardrog Human prosophila Drosophila	509 509 509 509 509	222222	2002 8821 1509 3884 3042 3135			27 28 30 31
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Mouse brail Drosophila Human TGF Human TGF Drosophila	1509 157 157	22333	2002 8821 1509 3884 3042		$\sigma \sigma \sigma \sigma \sigma$	27 28 30
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Human pros Mouse brai Drosophila	1448 509 509 157	22322	2082 8821 1509 3884		$\sigma \sigma \sigma$	28 29
Trinucleot Drosophila Rat androg Full-lengt Rat ardrog Full-lengt Rat ardrog Human prosophila Drosophila	1448 509 509	2232	28821 1509			27 28
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Mouse brail Drosophila Drosophila Drosophila Drosophila Drosophila Drosophila Drosophila	509	23	8821		5	27
Trinucleot Drosophila Rat androg Full-lengt Rat androg Human pros Mouse brai Drosophila Drosophila Drosophila Drosophila Drosophila Drosophila Drosophila	448 609	23	7007			6
Trinucleot Drosophila Rat androg Full-lengt Rat ardrog Human prosophila Drosophila Human TGF- Drosophila Drosophila	448	ŀ	נסט		5	n C
nuc sop an 1-1 1-1 san an sop sop	4	ى س	4044		9	25
nuc sop an 1-1 1-an an an se sop sop		23	1983			24
nuc sop an 1-1 an an se sop	533	22	N 3		6	23
nuc sop an 1-1 an an	335	23	22341		7.	22
nuc sop an l-1 l-an an	335	23	3894		7.	21
nuc sop an 1-1 an	444	20	2733		7.	20
Trinucleot Drosophila Rat androg Full-lengt Rat androg	446	23	381	4.1	7.	19
Trinucleot Drosophila Rat androg Full-lengt	9177	10	4180		8	18
Trinucleot Drosophila Rat androg	AAQ12002	12	3217	4.1	œ	17
Trinucleot Drosophila	157	10	3217		8	16
Trinucleot	83	23	46954	4.2	9	15
	24	21	403		۳	14
Spinocerebella	686	20	397			13
Tri-nucleotide	024	21	389		:	12
Drosophila melanog	9	23	7029	4.5	.2	11
Trinucleotid	023	21	277	4.6	ü	10

000000

00000

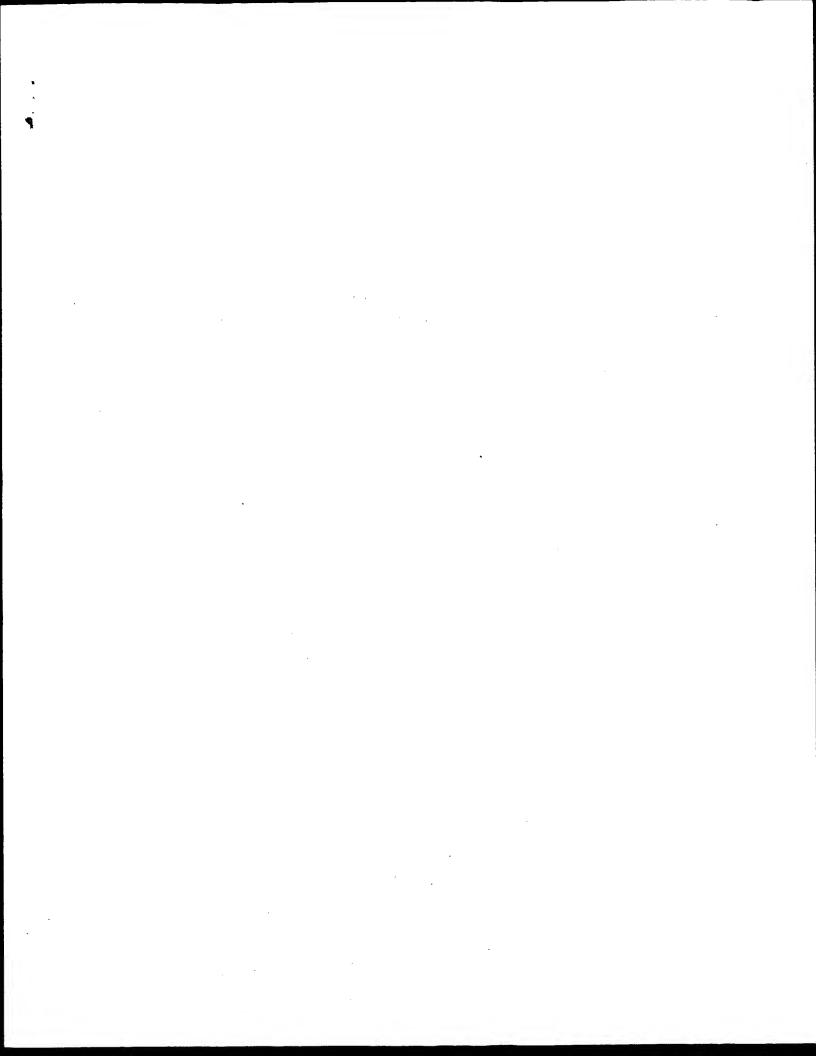
000

000

ALIGNMENTS

00000

```
ARESULT 1
ARESULT 1
AREA 3029
ID ABK13029
ID ABK1
AC ABK1
AC ABK1
XX
AX
DE DNA
XX
WHUMA
ANTI
KW ANTI
KW ANTI
KW ANTI
KW ANTI
KW ENDO
XX
HOMO
XX
HOMO
XX
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
FT CDS
XX
XX
XX
PF 03-J
XX
XX
PF 28-J
                                                                                                                                                                                                                                                       antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                            Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                28-JUN-2001; 2001WO-US20719
                                                      03-JAN-2002.
                                                                                          WO200200710-A2
                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                       DNA encoding human B7-like protein, B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABK13029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK13029 standard; cDNA; 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                Location/Qualifiers 8..1168
                                                                                                                          /*tag=  a
/product= "B7-like protein, B7-L_h2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ВР
                                                                                                                                                                                                                                                                                                                                                                    antirheumatic;
```



```
Qy
Search completed: April 28, 2003, 21:07:44 Job time: 2026.54 secs
                                                                                                                                                   В
                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; LENGTH: 1791
; TYPE: DNA
; ORGANISM: mus musculus
US-09-416-384A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-09-416-384A-6/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 29
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 33
OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = US-09-864-761-2182
                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match 3.7%; Score 43.2; DB 10; Length 1791; Best Local Similarity 75.0%; Pred. No. 0.018; Matches 54; Conservative 0; Mismatches 18; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patent.pm
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/09416384A Patent No. US20020081584A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 51; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: ESSIOUX, Laurent
TITLE OF INVENTION: Genes, proteins and biallelic markers related to central...
FILE REFERENCE: GENSET-045AUS
CURRENT FILING DATE: 1999-10-12
CURRENT PAPLICATION NUMBER: US/09/416,384A
PRIOR APPLICATION NUMBER: 00/106,457
PRIOR APPLICATION NUMBER: 60/103,955
PRIOR FILING DATE: 1999-10-30
PRIOR PRIOR DATE: 1999-10-12
PRIOR PRIOR DATE: 1999-10-12
PRIOR FILING DATE: 1999-10-12
PRIOR PILING DATE: 1999-10-17
PRIOR PILING DATE: 1999-10-17
PRIOR PILING DATE: 1999-10-17
PRIOR PILING DATE: 1999-10-17
PRIOR PILING DATE: 1999-10-10-10
PRIOR PILING DATE: 1999-10-10
PRIOR PILING DATE:
                                                                                                                                                                                                                                                                                860 TGCTGTAGAAGA 871
                                                                                                                                                   276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     329 GCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCTGTTGGTGA 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOUGUELERET, Lydie
CHUMAKOV, Ilya
COHEN, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLUMENFELD, Marta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 43.2; DB 10; Length 459;
Pred. No. 0.0075;
0; Mismatches 13; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
US-09-864-761-18923
   Matches
                      Best
                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence
SEQ ID NO 18923
LENGTH: 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                          OTHER
OTHER
                                                                                                                                                                                                                                                   OTHER
OTHER
                                                                                                                                                                                                                                                                                        OTHER
OTHER
                                                                                            OTHER
                                                                                                                                                                                OTHER
                                                                                                                                                                                                OTHER
                                                                                                                                                                                                                 OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL ITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                                               OTHER
                                                                                                                                                                                                                                      OTHER
                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 60/236,359
FILING DATE: 2000-09-27
APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 09/608,408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                   INFORMATION:
INFORMATION:
INFORMATION:
INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                          INFORMATION: INFORMATION:
                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                         INFORMATION:
                                                                                                                                                               INFORMATION:
                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                  INFORMATION:
   Similarity 51; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hanzel, David K.
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aeomica-X-1
                                                                                     NN: EXPRESSED IN FETAL LIVER, SIGNAL = 16
NN: EXPRESSED IN ADULT LIVER, SIGNAL = 21
NN: EXPRESSED IN HELA, SIGNAL = 45
NN: EXPRESSED IN HEAIN, SIGNAL = 29
NN: EXPRESSED IN LUNG, SIGNAL = 33
NN: EXPRESSED IN BONE MARROW, SIGNAL = 21
NN: EXT. 5228.1, EVALUE 9.00e-59
NN: SWISSPROT HIT: P53360, EVALUE 4.00e-15
NN: EST_HUMAN HIT: AW409956.1, EVALUE 1.00e-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-02-04
                                                                                                                                                                                                                                                   EXPRESSED EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-01-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-10-04
                                                                                                                                                                                                                                                                                        EXPRESSED
                                                                                                                                                                                                                                                                                                      EXPRESSED
                                                                                                                                                                                                                                                                                                                           MAP TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-05-23
                3.7%;
79.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US01/00661
                                                                                                                                                                                                                                                                                                                         AC009954.1
                                                                                                                                                                                                                                                                                                                                                                                                                             Listing Engine vers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
Score 43.2; D
Pred. No. 0.00
0; Mismatches
   0,
                                                                                                                                                                                                                                                   IN PLACENTA, SIGNAL = 69
IN HBL100, SIGNAL = 69
IN HEART, SIGNAL = 27
                                                                                                                                                                                                                                                                                                      IN BT474,
                                                                                                                                                                                                                                                                                                      SIGNAL
DB 10;
1.0056;
1es 13;
                                                                                                                                                                                                                                                                                                      47
 Indels
                                   Length
                                                                                                                                                                                                                                                                                        53
 0;
Gaps
   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOR
```

Ş

801 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 860

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-864-761-2182/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                          SOFTWARE: Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2182, Application Patent No. US20020048763A1
OTHER INFORMATION: E OTHER INFORMATION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 2000-05-26 PRIOR APPLICATION NUMBER: US 09/632,366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                            PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-10
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                       RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                      RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                       RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIOR
                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIOR
                                                                                                               OTHER INFORMATION:
                                                                                                                            FEATURE:
                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124 GCTG 121
                                                                                                                                                                                                                                FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00661
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00666 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                        FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          459
                                                                                                                                                                                                            Annomax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hanzel, David
Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09864761
                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               David R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-10-04
                EXPRESSED
EXPRESSED
EXPRESSED
                                                                              EXPRESSED
EXPRESSED
                                                                                                               MAP TO AC009954.1
                                                                EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2001-05-23
                                                                                                                                                                                                                                                                                         US 09/608,408
                                                                                                                                                                                                                                                                                                                                                       PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GB 24263.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 60/236,359
                                                                                                                                                                                                           Listing Engine vers.
 D IN BT474, SIGNAL = 47
D IN PACCENTA, SIGNAL = 53
D IN HBL100, SIGNAL = 69
D IN HEART, SIGNAL = 27
D IN FETAL LIVER, SIGNAL =
D IN ADULT LIVER, SIGNAL =
D IN HELA, SIGNAL = 45
                                                                                                                                                                                                                                                           09/774,203
                  16
21
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION: (1)...(455)
; OTHER INFORMATION: n = A,T,C
US-09-728-444-151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-728-444-151
                                                                                                                                                                                                                                                                                                                                                                                          US-09-738-626-544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 1206
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                       Publication No.
                                                                                                                                                                                                                                                                                                                                                                      Sequence 544, Application US/09738626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 151, Application US/09728444 Patent No. US20020161207A1
                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES FILE REFERENCE: 249-125 CURRENT APPLICATION NUMBER: US/09/738,626 CURRENT FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/728,444
CURRENT FILLING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/168,360
PRIOR FILING DATE: 1999-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: No. US20020161207A1el Murine Polynucleotide Sequences TITLE OF INVENTION: and Mutant Cells and Mutant Animals Defined Thereby FILE REFERENCE: LEX-0100-USA
            PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                         APPLICANT:
                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Friedrich, Glenn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                863 TGTAGAAGAAAAAGAGGATTTCGTA 887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    803 TGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCCGCTTGTTGTTTCTGC 862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         861 GCTGTAGAAGAA 872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: JP 00/280988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGCTGCTGCTGCCGCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAAACCTANACCAGGATGTGGGA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGCTGCCGCA 6104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    455
                                                                                                                                                                                                                           HAYASHI, MIKIRO
OCHIAI, KEIKO
YOKOI, HARUHIKO
                                                                                                                                                                                                                                                                                                                  NAKAGAWA, SATOSHI
                                                                                                                                                       IKEDA, MASATO
OZAKI, AKIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zambrowicz, Brian
Sands, Arthur T.
                                                                                                                                                                                          TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                   ANDO, SEIKO
                                                                                                                                                                                                                                                                                                    MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                     US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 9; Length 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-544
                                                                                                                                      Db 510688 ACGTAACCGCAGCTGCTCCAGTTGCAGTTGCTGCTGCAGGCGCTGCAGGCGGCGAAGCTG 510747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
RESULT 13
                                                          Db 510748 CTGCTGCAGAAGAAGGACGAGTTCGACGTCGTTCTCGAA 510788
                                                                                                                                                                                                                                                                                                      US-09-738-626-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-738-626-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Pat
SEQ ID NO 544
LENGTH: 384
                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09738626 Publication No. US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: NĀKAGAWĀ, SATOSHI
APPLICANT: MIZOGUCHI, HIROS
APPLICANT: ANDO, SEIKO
APPLICANT: HAYASHI, MIKIRO
APPLICANT: OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PatentIn ver. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: JP 00/280988 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 2000-08-03 NUMBER OF SEQ ID NOS: 7059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                   ORGANISM: Corynebacterium glutamicum
                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                            LENGTH: 3309400
                                                                                               859 CTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAA 899
                                                                                                                                                                            799 ACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTT 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158 CTGCTGCAGAAGAGAAGGACGAGTTCGACGTCGTTCTCGAA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           859 CTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAA 899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98 ACGTAACCGCAGCTGCCAGTTGCAGTTGCTGCTGCAGGCGCTGCAGGCGGCGAAGCTG 157
                                                                                                                                                                                                                       65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAYASHI, MIKI
OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IKEDA, MASATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YOKOI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HARUHIKO
                                                                                                                                                                                                                                        3.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.78;
                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
                                                                                                                                                                                                                                      Score 43.4;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 43.4; DB 9; Pred. No. 0.0058;
                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                       36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                        9; Length 3309400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 384;
                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                     0
                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                       0
```

US-09-864-761-18923/c ; Sequence 18923, Application US/09864761 ; Patent No. US20020048763A1

GENERAL INFORMATION

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QY
                                                                                                                                                                                                                                                                                                                              US-09-849-243-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-849-243-15
                                                                                                                                                                                                                                                                     Sequence 14, Application US/09849243 Patent No. US20020157127A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1370 GCTG 1367
                                                                                                                                                                                                                                                                                                                                                                                                                                             861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      801 GCTGCTGCCGCCGCCGCCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTTCT 860
                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE STREET: 1666 K Street, N.W., Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Granados, Patricia D.
REGISTRATION NUMBER: 33,683
REFERENCE/DOCKET NUMBER: 38
TELECOMUNICATION INFORMATION:
TELEPHONE: (202)912-2000
TELEFAX: (202)912-2020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PSTEM: PC-DOS/MS-DOS
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 3263 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION COMPLEXES FROM TRANSGENIC NON-HUMAN ANIMALS
                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                 APPLICANT: Kirschbaum, Bernd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: line MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                             NUMBER OF SEQUENCES:
                    STATE: D.C
                                  CITY: Washington
                                                                                                         POLITES, Greg
POLITES, Greg
OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION
COMPLEXES FROM TRANSGENIC
NON-HUMAN ANIMALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/849,243 FILING DATE: 07-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE STREET: 1666 K Street, N.W., Suite 300
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: exon
LOCATION: 1..3263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20006
                                                                                                                                                                                                          Meisterernst, Michael
                                                                                                                                                                                                                              Berglund, Erick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Meisterernst, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44.8; DB 9;
Pred. No. 0.0087;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38005-0148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 3263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
. . . Оу
                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/880,107
CURRENT FILING DATE: 2001-06-14
PRIOR APPLICATION NUMBER: US 60/211,379
PRIOR FILING DATE: 2000-06-14
PRIOR APPLICATION NUMBER: US 60/237,054
PRIOR FILING DATE: 2000-10-02
NUMBER OF SEQ ID NOS: 3950
SOFTWARE: PATECTLING VET: 2.1
SEQ ID NO 1748
LENGTH: 6604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                              ; OTHER INFORMATION: Genbank Accession No. US20020142981A1 D83783 US-09-880-107-1748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δį
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; SEQUENCE DESCRIPTION: SEQ ID NO: 14: US-09-849-243-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-880-107-1748/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1748, Application US/09880107
Patent No. US20020142981A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
Query Match
Best Local Similarity 76.4
Matches 55; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Horne, Darci T.
APPLICANT: Vockley, Joseph G.
APPLICANT: Scherf, Uwe
APPLICANT: Gene Logic, Inc.
TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer
FILE REFERENCE: 44921-5028-WO
                                                                                                                                   ORGANISM: Homo sapiens
                                                                                                                                                            TYPE: DNA
                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (202)912-2020 INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2707 GCTG 2704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     801 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 52; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/09/849,243
FILING DATE: 07-May-2001
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 38005-0148
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)912-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 33,683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Granados, Patricia D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH: 4286 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
1..4286
                    76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.8%;
Score 44.8; DB Pred. No. 0.014; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44.8; DB Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                       DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9; Length 4286;
    17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                       Length 6604;
    0;
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

0

APPLICANT:

Owen, Thomas A.

0

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-008-739A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-849-243-13/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 13, Application US/09849243 Patent No. US20020157127A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 1
LENGTH: 3577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: The Canine Androgen Receptor FILE REFERENCE: PC10893AGPR CURRENT PPLICATION NUMBER: US/10/008,739A CURRENT FILING DATE: 2002-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Canine
                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           573 TTGCTGCTGCTGCTGCTGCTGCTGCTGCTGAAGGAG 532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              829 TGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAG 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       633 GCTGCTGCTACCTTCTGATACTACCTCCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            769 GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTG 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTMARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLITES, Greg
TITLE OF INVENTION: PURIFICATION OF HIGHER ORDER TRANSCRIPTION
COMPLEXES FROM TRANSGENIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
SEQUENCE DESCRIPTION: SEQ ID NO: 13:
                                                                                                                                                                                                                                      TELEPHONE: (202)912-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: HELLER,
                                                             FEATURE:
                                                                              MOLECULE TYPE: cDNA
                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Kirschbaum, Bernd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67;
                                                                                                                                                                                                                                                                             NAME: Granados, Patricia D. REGISTRATION NUMBER: 33,683 REFERENCE/DOCKET NUMBER: 38
                    LOCATION:
                                                                                                    TOPOLOGY:
                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/849,243 FILING DATE: 07-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: D.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: HELLER, EHRMAN, WHITE & MCAULIFFE STREET: 1666 K Street, N.W., Suite 300
                                         NAME/KEY:
                                                                                                                                                            LENGTH: 1310 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Smock, Steven L.
                                                                                                                                                                                                                       EFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Berglund,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Meisterernst, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                       (202)912-2020
                                                                                                    linear
                                       exon
                    1..1310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Erick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 46; DB 9;
Pred. No. 0.004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                 38005-0148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 9; Length 3577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
US-09-849-243-15/c; Sequence 15, Application US/09849243; Patent No. US20020157127A1; GEMERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; ORGANISM: Homo sapiens US-09-822-846-491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                     RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-822-846-491/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-849-243-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Pa
SEQ ID NO 491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 491,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/195,605
PRIOR FILING DATE: 2000-04-06
NUMBER OF COLUMN TO THE PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/822,846
CURRENT FILING DATE: 2001-03-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Jacobs, Kenneth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING NOVEL SECRETED PROTEINS FILE REFERENCE: GIN 6400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                   2119 GCTGCTGCCGCA 2108
                                                                                                                                                                                                                                                                                                                                                                                                    861 GCTGTAGAAGAA 872
                                                                                                                                                                                                                                                                                                                                                                                                                                         801 GCTGCTGCTGCCGCCGCCGTTGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   276 GCTG 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               861 GCTG 864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   801 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity les 52; Conserv
APPLICANT: Kirschbaum, Bernd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Resnick, Richard J.
Gulukota, Kamalakar
Graham, James R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spaulding, Vikki
Wong, Gordon G.
Clark, Hilary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genetics Institute, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fechtel, Kim
Howes, Steven H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bowman, Michael R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Agostino, Michael J.
Steininger II, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Merberg, David
Treacy, Maurice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Evans, Cheryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Collins Racie, Lisa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McCoy, John M.
LaVallie, Edward R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09822846 o. US20030027139A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3.8%;
76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.8%;
81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 44.8; DB 9; Pred. No. 0.0075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 44.8; DB 9;
Pred. No. 0.0048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
```

```
; OTHER INFORMATION: MAP TO AF121782.1
; OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.9
US-09-864-761-16305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-864-761-16305
                                                                                                                                                                                               SOFTWARE: Annomax Sequence Listing Engine vers. 1.1 SEQ ID NO 16305 LENGTH: 401
                            Matches 201;
                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 16305, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: US 09/774,203 PRIOR FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/234,687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: US 09/632,366 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/180,312 PRIOR FILING DATE: 2000-02-04 PRIOR APPLICATION NUMBER: US 60/207,456 PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Penn, Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                      FEATURE:
                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1132 CAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1168
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 09/608,408
FILING DATE: 2000-06-30
APPLICATION WINDERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00668 FILING DATE: 2001-01-30 APPLICATION NUMBER: PCT/US01/00663 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00666
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00667
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00664 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00670
                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCGGGTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTTAATCTGGC 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rank, David R.
Hanzel, David K.
                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                     2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-01-30
                                                                                                                                                                                                                                                                          2001-01-29
                                         16.8%;
                    Score 196.8;
Pred. No. 6.5e
0; Mismatches
                3.5e-50;
7;
                                                      DB 10; Length 401;
                    0,
                  Gaps
                  0;
                                                                                                   RESULT 4
US-10-008-739A-1/c
                                                                                                                                                                                В
                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                            QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-983-965-4945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρy
                                 GENERAL INFORMATION:
APPLICANT: Pfizer Inc.
                                                                   Sequence 1, Application US/10008739A Patent No. US20020161194A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 4945
LENGTH: 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
 APPLICANT:
                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Warren, Wesley C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 5912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                     162
                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match 11.7%;
Local Similarity 77.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165;
Lu, Bihong
               Castleberry,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tao, Nengbing
Byatt, John C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
```

```
US-09-983-965-4945

: Sequence 4945, Application US/09983965

; Patent No. US20020137160A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/983,965 CURRENT FILING DATE: 2001-10-26 PRIOR APPLICATION NUMBER: US 09/465,231 PRIOR FILING DATE: 1999-12-15 PRIOR APPLICATION NUMBER: US 60/113,678 PRIOR APPLICATION NUMBER: US 60/113,678 PRIOR FILING DATE: 1998-12-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Mathialagan, Nagappan
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES ASSOCIATED WITH LACTATION AND
TITLE OF INVENTION: MUSCLE AND FAT DEPOSITION
FILE REFERENCE: 37-21(10297)C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Clone ID: 26-LIB34-017-Q1-E1-G9
                                                                                                                                                                                                                                                                              102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
366 TCACTTCGGCAAGCTACCAAGAGGGCCGGAACT 398
                                                      222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACT 254
                                                                                                                306 TGAGAGGCACAGTGGTGCTGAGCATGACACCTAATGAGACCATCATCACCAGTGACCGCT
                                                                                                                                                                                                                                                                                                                                           186 CAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGTCCCAAGAATGTCACAGCCCCTGAAGG 245
                                                                                                                                                                                                                                                                                                                                                                          42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                    TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                              GCTCGGAGGCTCGCTTCAACTGCACCATCTCGCAGGGCTGGAAGCTCGTCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAATTGGCTACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACCAATGACCGCTTCACCTCTCAGAG 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACCAATGACCGCTTCACCTCTCAGAG 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAATAGAGACCCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCA 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 136.2; DB 1
Pred. No. 2.3e~31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 398; :
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Gaps
                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                253
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

GenCore version $5:1.4_p5_4578$ Copyright (c) 1993 - 2003 Compugen Ltd.

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                             Published_Applications_NA:*

1: /cgn2_6/ptodata/1/pubpna/US

2: /cgn2_6/ptodata/1/pubpna/US

3: /cgn2_6/ptodata/1/pubpna/US

4: /cgn2_6/ptodata/1/pubpna/US

5: /cgn2_6/ptodata/1/pubpna/US

6: /cgn2_6/ptodata/1/pubpna/US

6: /cgn2_6/ptodata/1/pubpna/US

6: /cgn2_6/ptodata/1/pubpna/US

9: /cgn2_6/ptodata/1/pubpna/US

9: /cgn2_6/ptodata/1/pubpna/US

10: /cgn2_6/ptodata/1/pubpna/US

11: /cgn2_6/ptodata/1/pubpna/US

12: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

14: /cgn2_6/ptodata/1/pubpna/US

15: /cgn2_6/ptodata/1/pubpna/US

16: /cgn2_6/ptodata/1/pubpna/US

17: /cgn2_6/ptodata/1/pubpna/US

18: /cgn2_6/ptodata/1/pubpna/US

19: /cgn2_6/ptodata/1/pubpna/US

10: /cgn2_6/ptodata/1/pubpna/US

10: /cgn2_6/ptodata/1/pubpna/US

10: /cgn2_6/ptodata/1/pubpna/US

10: /cgn2_6/ptodata/1/pubpna/US

11: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

13: /cgn2_6/ptodata/1/pubpna/US

14: /cgn2_6/ptodata/1/pubpna/US

15: /cgn2_6/ptodata/1/pubpna/US

16: /cgn2_6/ptodata/1/pubpna/US

17: /cgn2_6/ptodata/1/pubpna/US

18: /cgn2_6/ptodata/1/pubpna/US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           April 28, 2003, 16:24:32; Search time 138.543 Seconds (without alignments) 9173.565 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          709820 segs, 544064369 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-729-264-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 agtgatcatggtggcaggag.....gtaatacaactgtagtatag 1168
: /cgn2_6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
    /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
    /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
    /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US10_NEW_PUB.seq:*
    /cgn2_6/ptodata/1/pubpna/US60_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
/cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
/cgn2_6/ptodata/1/pubpna/US06_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1419640
```

ALIGNMENTS

score greater than or equal to the score of the result bein and is derived by analysis of the total score distribution. pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

SUMMARIES

100 100 100 100 100 100 100 100 100 100	Match Length DB ID	9 US-09-918-995-3342 S	16.8 401 10 US-09-864-761-16305	11.7 398 10 US-09-983-965-4945	.9 3577 9 US-10-008-739A-1	3.8 1310 9 US-09-849-243-13	3.8 2614 9 US-09-822-846-491 :	.8 3263 9 US-09-849-243-15	3.8 4286 9 US-09-849-243-14	3.8 6604 10 US-09-880-107-1748	3.8 455 9 US-09-728-444-151	3.7 384 9 US-09-738-626-544	3.7 3309400 9 US-09-738-626-1	3.7 293 10 US-09-864-761-18923	3.7 459 10 US-09-864-761-2182		3.7 1791 10 US-09-416-384A-6	3.7 1791 10 US-09-416-384A-6 3.6 2424 9 US-10-029-217A-25 S	3.7 1791 10 US-09-416-384A-6 3.6 2424 9 US-10-029-217A-25 S 3.6 4959 9 US-10-029-217A-1 S	ര് ന് ത	Result 269 1 269 1 196.8 2 196.8 3 136.8 6 44.8 6 6 44.8 6 7 44.8 6 8 44.8 6 9 44.8 6 10 43.4 6 11 43.4 6 13 43.3
---	--------------------	------------------------	---------------------------------	--------------------------------	----------------------------	-----------------------------	--------------------------------	----------------------------	-----------------------------	--------------------------------	-----------------------------	-----------------------------	-------------------------------	--------------------------------	-------------------------------	--	------------------------------	--	---	---------	---

Db

174

Š

1072 GCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTAATCTGGC 1131

; FEATURE: ; NAME/KEY: misc_feature ; LOCATION: (1)...(474) ; OTHER INFORMATION: n = A,T,C or G US-09-918-995-3342 US-09-918-995-3342 RESULT 1 Qy DЬ Qy В CURRENT APPLICATION NUMBER: US/09/918,995 CURRENT FILING DATE: 2001-07-30 PRIOR APPLICATION NUMBER: US/09/235,076 PRIOR FILING DATE: 199-01-20 NUMBER OF SEQ ID NOS: 38054 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 3342 LENGTH: 474 GENERAL INFORMATION: Query Match Best Local Similarity Matches 272; Conserv Sequence 3342, Application US/09918995 Publication No. US20030073623A1 APPLICANT: Hyseq, Inc. TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBTAINED TITLE OF INVENTION: FROM VARIOUS CDNA LIBRARIES FILE REFERENCE: 20411-756 ORGANISM: Homo sapiens TYPE: DNA 1012 CAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCA 1071 952 TGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCTCCCCTCC 1011 54 ACTITTAAGGAAATCTGAAAAAGAGAAGAACAAACAAAGAAACTGAGACAGAAAGTGGAAA 113 Conservative 23.0%; 0; Mismatches Score 269; DB 9; L. Pred. No. 5.8e-72; Length 474; Indels 0

Gaps

0,

```
RESULT 15
BE376590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                       Ş
                                                                   밁
                                                                                                        Q
                                                                                                                                                 DЬ
                                                                                                                                                                                      80
                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 233; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
415 CTGCCTTCCTCAGTGCNAG 435
                                                                                                                                                                       102 GCTCCCAGGCTCGACTGCAACTGCCACCGTCTCCCAGGGCTGGAAGCTCATGATGTGGGCTC 161
                                                              210 TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT 269
                                                                                                     162 TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                               150 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342 CTGCTTACCTTACCGTCCAAG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              295 TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                               90 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 149
                                                                                                                                                                                                                                                                          42
                                                                                                                                                                                                                                                         CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM8743 row: f column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE376590 663 bp mRNA linear EST 21-JUL-2000 601226419F1 NCI_CGAP_Maml Mus musculus cDNA clone IMAGE:3584645 5', BE376590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; 1 (bases 1 to 663)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE376590.1 GI:9321955
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 498.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The T.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sal1;
Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigator
providing samples: Gilbert Smith, NIH"
a 193 c 170 g 157 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:3584645"
/clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 663
                                                                                                                                                                                                                                                                                                                                 15.4%;
72.6%;
                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                     Score 180.2; DB 1
Pred. No. 6.6e-32;
                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                      DB 10;
                                                                                                                                                                                                                                                                                                                 88;
                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                         Length 663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
Murinae; Mus.
                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                 0,
```

Search completed: April 29, 2003, 09:24:15 Job time: 1902.29 secs

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                 128 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 187
342 CTGCTTACCTTACCGTCCAAG 362
                                                                                                                                                         222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                           162
                                                                                                                                                                                                                                                                                                                                         102 GCTCCCAGGCTCCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                        308
                                                                                                                                                                                                                                                                                                   188 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                      42 CCGGTTCTGGGTCTGGTAATGAAGGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                         TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                     TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                           TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                    TGCAGCCCAGTGACTCGGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                      TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prepared by using trehalose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. cDNA went through one round of normalization to Rot = 5.0 and subtraction to Rot = 20.0. Second strand cDNA was prepared with the primer adapter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of sequence[5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               430
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      homolog to IGSF5 PROTEIN (FRAGMENT)
putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="putative"
369 c 374 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="putative"
1552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FCCCCASRREKEESTYQNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DSGSVQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue_type="small intestine"
/clone_lib="RIKEN full-length enriched mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/strain="C57BL/6J"
/db_xref="FANTOM_DB:2010003D20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="2010003D20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="MGD:MGI:1904786"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 181.8; DB 11,
Pred. No. 3.1e-32;
Pred. No. 3.1e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 11; Length 1552;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       evidence: ISS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                      367
                                                                                                                                                                              281
                                                                                                                                                                                                                   307
                                                                                                                                                                                                                                                           221
                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

밁 Qy 밁 Q 망 QΥ В Qy Дb δÃ DЬ Ş

```
RESULT 14
AI425363
                               Qy
                                                                                                      맑
                                                                                                                                                                  δõ
                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                            Д
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                            102 GCTCCCAGGCTCGACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                               115 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                               42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                         TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                   TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                         ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Marra,M., Hillier,L., Kucaba,T., Martin,J., Beck,C., Wylie,T., Underwood,K., Steptoe,M., Theising,B., Allen,M., Bowers,Y., Pe, B., Swaller,T., Gibbons,M., Pape,D., Harvey,N., Schurk,R., Ri,E., Kohn,S., Shin,T., Jackson,Y., Cardenas,M., McCann,R., Waterston,R. and Wilson,R.

The WashU-NCI Mouse EST Project 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone is available royalty-free through LLML; contact the IMAGE Consortium (info@image.llnl.gov) for further information. This read is a RESEQUENCE of a previously sequenced mouse clone This read has been verified (found to hit its original self in the second contact of the second contact the second contact of the second co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Marra M/WashU-NCI Mouse EST Project 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mx91d09.y1 Soares mouse NML Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI425363.1 GI:4271294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AI425363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POLYA-No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MGI:427273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      primer: -40RP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          orientation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /Clone_lib="Soares mouse NML"
/tissue_type="Liver"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bonaldo."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    constructed and normalized by Bento Soares and M.Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="IMAGE:693713"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.5%;
72.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 180.8; DB Pred. No. 4.6e-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        musculus cDNA clone IMAGE:693713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 15-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                            234
                                                                                                                                                                                                                                                                                                                                                                                      174
                                      281
                                                                                                             294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ritter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AK008060
                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                   TITLE
                                                                                                                                                                          ORGANISM
                            JOURNAL
                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     456 CTGCCTTCCTCAGTGCAAG 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    342 CIGCTTACCTTACCGTCCAAG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162 TCAGTGACATGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  396 TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 336 TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             156 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
99279253
                                                                                                                                                                                                                Mus musculus (strain:C57BL/6J) adult male mRNA, clone_lib:RIKEN full-length enriched
                                                                                                                                                                                                                                                                                                                                                                   AK008060 1552 bp mRNA linear Mus musculus adult male small intestine cDNA, RIKEN enriched library, clone:2010003D20:homolog to IGSF5
                                                                                                                                                Eukaryota;
                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                 clone: 2010003D20.
                                                                                                                                                                                                                                                                      HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                AK008060.1 GI:12842009
                                                                                                                         dilligita;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://image.llnl.gov
Plate: LLAM10260 row: n column:
                                                                                                                                                                                                                                                                                                                                               (FRAGMENT), full insert sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              quality sequence stop: 628.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 through the I.M.A.G.E. Consortium/LINL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"
277 c 242 g 179 t
                                                                                                                      ; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall;
Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor; biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="IMAGE:4459973"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15.6%;
                                                                                                                                        Chordata;
                                                                                                                      Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 181.8; DB : Pred. No. 2.9e-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                   enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 12; Length 931;
                                                                                                                                                                                                                                          small intestine cDNA to
                                                                                                                                                                                                                     mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                   cDNA library
                                                                                                                                                                                                                                                                                                                                                                                          HTC 19-JAN-2002 full-length
                                                                                                                 Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 395
                                                                   COMMENT
```

8 В S 밁 Ş

밁

Š 밁 Qy 밁 Qy

밁

JOURNAL

Direct Submission

cDNA library was prepared and sequenced in Encyclopedia Project of Genome Exploration

Mouse Genome Research Gro

Group

in Riken

further details

Please visit our web site (http://genome.gsc.riken.go.jp/)

Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Gemomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-Csci. Tsurumi-kı, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)

Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBMED
E 5 (bases 1 to 1552)

S Adachi, J., Alzawa, K., Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hori, F., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Kori, F., Kato, H., Kawai, J., Kojima, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackenbush, J., Salio, H., Saito, R., Sakai, K., Sano, H., Sasaki, D., Schriml, L., Shibata, K., Shibatata, Y., Shinagawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yamanaka, I., Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RS Kawai, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishi, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konnoo, H., Adachi, J., Fukuda, S., Aizawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Saito, R., Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischmann, W., Gaasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Quackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Tomita, M., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Baldarelli, R., Barsh, G., Blake, J., Boffelli, D., Bojunga, N., Carninci, P., de Bonaldo, M.F., Brownstein, M.J., Bult, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suzuki, H., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., and Hawyshia, K., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., and Hawyshia, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384 format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., OKazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21085660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1121785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shibata, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Itoh, M., Aizawa, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nagaoka, S., Sasaki, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci, P.,
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                RESULT 11
AW990468
                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                      COMMENT
                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                       JOURNAL
                                                                                                                                                                                    ORGANISM
                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             115 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                          415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               235 TTAACCAAATGGTGGTGCTGAGTCTCACCCAACGCACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                          342 CTGCTTACCTTACCGTCCAAG 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355 TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCCTTCCTCAGTGCAAG 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAGTGACATGGTGGTGCTAAGCGTCAGGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                           AW990468 611 bp mRNA linear EST 02-JUN-2000 uf37d05.yl Soares_mammary_gland_NMLMG Mus musculus cDNA clone IMAGE:1513545 5' similar to TR:060962 060962 L549.1. ;, mRNA
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
                                                       Unpublished (1997)
                                                                                                                                              Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Seq primer: -28ml3 rev2 ET from Amersham
                                                                        Tumor Gene Index
                                                                                       NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Ana
                                                                                                                                                                                                       house mouse
                                                                                                                                                                                                                                         AW990468.1 GI:8186027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGI:427273
                                                                                                                               (bases 1 to 611)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 quality sequence stop: 454.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and Eco RI sites of the modified pT7T3 vector. Library constructed and normalized by Bento Soares and M.Fatima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="Soares mouse NML"
/tissue_type="Liver"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090
/clone="IMAGE:693713"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           126 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 181.8; DB y;
Pred. No. 2.7e-32;
Pred. No. 2.7e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122 g
                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105 t
                                                                                           Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
```

```
* VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
BG173684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δδ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 234;
                                                                                                                                                                                                                 ORGANISM
                                                                                                                                AUTHORS
                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGCCTTCCTCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC 243
                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     High quality sequence stop: 474.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMAGE Consortium (info@image.llnl.gov) for further information. MGI:940397
                                                                                                                                                                                                                                                                                                                                       BG173684
602336823F1 NCI_CGAP_Mam1 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: -40RP from Gibco
                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                   BG173684
BG173684.1 GI:12680387
                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                          house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
cDNA Library Preparation: Life Technologies,
                                                                                                                                                  (bases 1 to 931)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="vector: pT7T3D-Pac (Pharmacia) with a modified /note="vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. " a 155 c 156 g 148 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="female (lactating)"
/tissue_type="mammary gland"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Soares_mammary_gland_NMLMG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:1513545"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.6%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 181.8;
Pred. No. 2.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                         931 bp
                                                                                                                                                                                                                                                                                                                                                  bp mRNA linear EST 06-FEB-2001 musculus cDNA clone IMAGE:4459973 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.8e-32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
RESULT 9
AV601192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                               TITLE
                                                                                                                                           MEDLINE
                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     252 ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             132 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCGCGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTCGGTGTCCCCAAGACACTGGAGGTGGT 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 586
                                                                                                                                                                                                                                                                                                                                                                                                                               AV601192
5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end
                                                                                                                                                                                                                                                                                                                                                                        AV601192 AV601192.1 GI:9723510 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone tracking errors.
Single
                  Email: kazusugi@cocoa.ocn.ne.jp
                                                     Shirakawa Institute of Animal Genetics Odakura, Nishigo, Nishi-shirakawa, Fuk-Tel: 81-248-25-5641
                                                                                                        Contact: Yoshikazu Sugimoto
Animal Genetics Division
                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                       Bos taurus
                                                                                                                                                                                                                                                                                                                                                         COW
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AV601192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        was generated during the R&D process and may have higher chance of
                                                                                                                                             21570554
                                                                                                                                                          Nucleic Acids Res. 29 (22),
                                                                                                                                                                            bovine ESTs
                                                                                                                                                                                               poly(A) tail-removed cDNA libraries and
                                                                                                                                                                                                            Establishment of a high throughput EST sequencing system
                                                                                                                                                                                                                                                Takasuga, A., Hirotsune, S., Itoh, R., Jitohzono, A., Suzuki, H., Aso, H
                                                                                                                                                                                                                                                                                   Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1-7-22 Suehiro-chou, Tsurumi-ku,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIMERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LIBRARY
                                                                                                                                                                                                                                                                 (bases 1 to 524)
                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                Sugimoto, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R.Site 1 : SacI
R.Site 2 : SacI
                                      81-248-25-5725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequencing: -21M13
 pass
                                                                                                                                                                                                                                                                                                                                                                                                                           sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Bos taurus kidney fetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
159 c 143 g 207 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:9598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Pan troglodytes"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="PTB-112N07.F"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .677
 sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 190.8;
Pred. No. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                              524
                                                                                                                                                              E108
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                            (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus cDNA clone E1KI002H04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1e-34;
                                                                       Fukushima
                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12;
                                                                                                                                                                                               determination
                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                     961-8061, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      677;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 27-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                               of 36,000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

ۍ[.]

information

```
RESULT 10
AA265274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΩV
                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGTCCCAAGAATGTCACAGCCCTGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGC 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCAACTCAGCGATGCCGGGCAAGTNAAATGCAGCCTTCANAACAGCAATCGGGATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAGAGGCACAGTGGTGCTGAGCATGACACCTAATGAGACCATCATCACCAGTGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCGGAGGCTCGCTTCAACTGCACCATCTCCCAGGGCTGGAAGCTCGTCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACTTCGGCAAGCTACCAAGAGGGCGGGAACTTCATCTNTGAGATGATAATTCATGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           229;
                                                   4444 Forest Park Parkway, Box 8501, Tel: 314 286 1800 Fax: 314 286 1810
                                                                                                        Contact: Marra M/Mouse EST Project
WashU-HHMI Mouse EST Project
Washington University School of MedicineP
                                                                                                                                                                                                                Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, T., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                     mx91d09.rl Soares mouse NML Mus 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This clone was obtained from a polyA-deleted cDNA library. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                   EST
This clone is available royalty-free through LLNL; IMAGE Consortium (info@image.llnl.gov) for further:
                                                                                                                                                           Unpublished (1996)
                                                                                                                                                                                The WashU-HHMI Mouse EST Project
                                                                                                                                                                                                   Waterston, R.
                                                                                                                                                                                                                                                                                        Mammalia; Eutheria; 1 (bases 1 to 471)
                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                    AA265274.1 GI:1901370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA265274
                                    Email: mouseest@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                  house mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Bos taurus kidney fetus"
/tissue_type="kidney"
/dev_stage="fetus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector: pZL1; Si:
was deleted from a Not1
135 c 168 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9913"
/clone="E1KI002H04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15.9%;
                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 185.8; DB 10;
Pred. No. 3.1e-33;
Pred. No. 3.7e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Site_1: Sall; Site_2: Not1; Poly A ot1 site"
96 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                          musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                           St.
                                                                                            Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 524;
                                                                                            MO 63108
                  contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 20-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

```
AG069679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                 REFERENCE
                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                         LOCUS
                                                          AUTHORS
                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                           500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                               342 CTGCTTACCTTACCGTCC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             282 TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200 CAGCCTGTGGATCCAGCAGTGAAATCATAGAGGGTCCCAAGAATGTCACAGCCCCTGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGGGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCGGAGGCTCGCTTCAACTGCACCATCTCCCAGGCTGGAAGCTCGTCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                         CCGCCTTCCTTTCTGTTC 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCACTTCGGCAAGCTACCAAGAGGGGGGGAACTTCATCTCTGAGATGATAATTCATGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGAGAGGCACAGTGGTGCTGAGCATGACACCTAATGAGACCATCATCACCAGTGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCAACTGAGCGATGCCGGGCAAGTCAAATGCAGCCTTCAGAACAGCAATCGGGATGGAG 499
                                                                                                                                                                                                                                        Pan troglodytes DNA, clone: PTB-060F12.F, AG069679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: tads@anri.barc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
                                                                                                                                                               BAC
                                                                                                                                                                                                       GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and -minmatch 12 options.
PCR PRimers
FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USDA, ARS, Beltsville Agricultural Research Center
Bdlg. 200 km 2A, Beltsville, MD 20705, USA
Tel: 301 504 8416
Fax: 301 504 8414
Unpublished
                    BAC end sequences of Library PTB
                                                          Fujiyama, A., Hattori, M.,
                                                                                                                                            Pan troglodytes
                                                                                                                                                                                                                          AG069679.1 GI:16621481
                                       Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Plate: 27 row: H column: 19
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                           troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male Library clone:PTB-060F12.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="BARC 5BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Vector: pCMV SPORT6; Site_1: Not1; Site_2: Sal1; Library made from pooled mRNA isolated from mammary tissues at eight physiological, developmental, and disease states."
                                                                                                    Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                       Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 с
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16.5%;
75.5%;
                                                                                                    Primates; Catarrhini; Hominidae;
                                                                                                                     Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 193.2; DB 10; Pred. No. 5.6e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165 g
                                                            Toyoda, A.,
                                                                                                                     Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              102 t
                                                          Taylor, T.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             78;
                                                                                                                                                                                                                                                               genomic survey sequence
                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                    GSS 03-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

밁 Ωy В δõ В Qy 밁 Qy 망 ş 밁 ρ

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
AG107877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                              TITLE
JOURNAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                           JOURNAL
                                                                                       AUTHORS
                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              132 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72 TCCGCGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTTGTTCCGGAGCCCCAGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCGTGGCTACCTGGAAGACCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTG 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACT 586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGC 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTCGGTGTCCCCAAGACACTGGAGGTGGT 676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTCGGCGTCCCCAAGGTAAGTGAAGATGT 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCGTGGCTACCTGGAAGAGCCTGAAGGCCCACAAGTCTGCAACTGTAAATCTCACTGTG 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198;
                                                                                                                                                                                                                                                                                                                                         677 bp DNA linear GSS 03-NOV-200
Pan troglodytes DNA, clone: PTB-112N07.F, genomic survey sequence.
AG107877.1 GI:16728395
Direct Submission Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (02-AUG-2001) Asao Fujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)
Clones are derived from the chimpanzee BAC library PTB This BAC end was generated during the R&D process and may have higher chance of
                                                                                                                                                                                                                                                                         Pan troglodytes male lymphoblast DNA, clone_lib:PTB Chimpanzee Male BAC Library clone:PTB-112N07.F.
Pan troglodytes
                                                                                                                                                                       Fujiyama,A., Hattori,M., Toyoda,A.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fujiyama,A., Hattori,M., Toyoda,A., Taylor,T.D., Yada,T.,
Totoki,Y., Watanabe,H. and Sakaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 622)
Fujiyama, A., Hattor
                                                                  Totoki,Y., Watanabe,H.
                                                                                     Fujiyama,A.,
                                                                                                                            Unpublished
                                                                                                                                                 BAC end sequences of Library PTB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LIBRARY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIMERS
                                                                                                             (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vector : pKS145
R.Site 1 : SacI
R.Site 2 : SacI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequencing: -21M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tracking errors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cell_type="lymphoblast"
/clone_lib="PTB Chimpanzee Male BAC Library"
153 c 128 g 176 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Pan troglodytes"
/db_xref="taxon:9598"
/clone="PTB-060F12.F"
                                                                                                        1 to 677)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 622
                                                                  Hattori,M., Toyoda,A., atanabe,H. and Sakaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 190.8; DB 17; Pred. No. 2.1e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                     Taylor, T.D., Yada, T.,
                                                                                                                                                                                            Taylor, T.D., Yada, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                      GSS 03-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 5
BE032610
                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                          JOURNAL
                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATT 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCTTCCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGTGACATGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         336;
                   Tel:
                                                                                                                                                                                                    Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
1 (bases 1 to 527)
Fahrenkrug, S.C., Freking, B.A., Rohrer, G.A., Smith, T.
                                                                                                                                                                                                                                                                                                                                                                     BE032610 527 bp mRNA linear 132035 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence.
                                                                                                                                  EST
                                                                                                                                                                     Stone, R.T., Heaton, M.P., and Keele, J.W.
                                                                                                                                                                                                                                                                                                                      BE032610.1
EST.
                                                      USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, U
                                                                                             Contact: Smith TPL
                                                                                                            Unpublished (2000)
                                                                                                                                               Design and use of two pooled tissue
                                                                                                                                                                                                                                                                                                                                                         BE032610
                                                                                                                                                                                                                                                                                 scroia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  154
                                                                                                                              discovery in swine
                   402 762 4366
402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  was cleaved with BanHI and XhoI. Vector: a modified
pBluescript KS(+) after bulk excision from Lambda FLC I."
a 167 c 161 g 149 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:8327619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 256.8; DB 10; Pred. No. 6.3e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 132;
                                                                                                                                                                                  Grosse, W.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                   normalized
                                                                                                                                                                                  Bennett, G.A.,
                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                        Smith, T.P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      628
                                                                                                                                                                                    Laegreid, W.W.
                                                                                                                                                                                                                                             Sus.
                                                                                                                                                                                                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                            09-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                        Casas, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

Ş В Š 밁 δÃ 밁 δÃ 밁 Ω 밁 Š 밁 δÃ В 20

밁

LOCUS

```
RESULT 6
BE476432
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
 COMMENT
                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                              REFERENCE
                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                TITLE
                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
                                                                              AUTHORS
                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       158
                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        102
                                                                                                                                                                                                                                                                                                                                       518
                                                                                                                                                                                                                                                                                                                                                                                                   458
                                                                                                                                                                                                                                                                                                                                                                                                                                342
                                                                                                                                                                                                                                                                                                                                                                                                                                                               398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       42
                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCGGAGGCTCGCTTCAACTGCACCATCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCTTGTGGATCCGGCAATGAAATCTTAGAGGGTCCCAGGAACGTCACGGCGGTGAAGG
                                                                                                                                                                                                                                                                                                                                      TCCTTGCGGA 527
                                                                                                                                                                                                                                                                                                                                                                  TCGCTGAGAA 411
                                                                                                                                                                                                                                                                                                                                                                                                   CCGCTTTCCTTTCCGTCCAAGTCATGGGGGGTGCTGCTCATTCCCGGAGGCAGCCTCGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACGTCTGCAAGTTATGAAGAGGGCGGTAACTTCATCTCTGAGATGATCATCCATGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAAAGGCACGGTGGTTCTGAGCGTCACGCCCACCGAGCCCATCATCACCAACGACCGAT
                                                                                                                                                                                                                                         BE476432
159670 BJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18
             Unpublished (2000)
                                                             Sonstegard,T.S., Capuco,A.V.,
Wells,K.D.
                                                                                                                                        Bos taurus
Eukaryota;
                                                                                                                                                                           COW.
                                                                                                                                                                                            ESI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BACKWARD: GTTTCCCAGTCACGACG
Plate: 63 row: E column: 1
Contact: Sonstegard TS
                                              Mapping of Expressed Sequence
                                                                                                            Bovidae; Bovinae; Bos.
                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                         BE476432.1 GI:9595965
                                                                                                                                                                                                                           BE476432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and -minmatch 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                         (bases 1 to 517)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                          BARC 5BOV Bos taurus cDNA 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Vector: pCMV SPORT6; Site
Library made from pooled tissue
and 30 embryos."
147 c 176 g 99 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="MARC 1PIG"
/tissue_type="pooled"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Sus scrofa"
/db_xref="taxon:9823"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 242; DB 10;
Pred. No. 1.9e-46;
0; Mismatches 80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                176 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pCMV SPORT6; Site_1: NotI; Site_2:
rom pooled tissue from day 11, 13, :
                                                                                                                                                                                                                                                         517 bp
                                                Tags
                                                                              Van Tassell, C.P., Ashwell, M.S. and
                                                                                                                                                                                                                                                         mRNA
                                                from a normalized
                                                                                                                                                                                                                                         mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 527;
                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                           EST
                                                bovine mammary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                           28-AUG-2000
                                                                                                                              Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : SalI;
15, 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
```

RESULT

```
Qy
                                                                                               γ
                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
BG740428
LOCUS
밁
                                                                 밁
                                                                                                                                     밁
                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                          δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                  1139
                                                                                                     1079
                                                                                                                                                                         1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        685
                                                                                                                                       497
                                                                                                                                                                                                            437
                                                                                                                                                                                                                                                                                377
                                                                                                                                                                                                                                                                                                                                                     Local Si
hes 268;
                GAGAAGGTCAGTAATACAACTGTAGTATA 1167
                                                                                                                                     AAGAAATCTGAAAAAGAGAAGAACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAAC 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCT 625
                                                                                                   GATCAACGTCCAGGCCAGGCAAGTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCT 1138
                                                                                                                                                                      TGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGGGCCCTCCTCACCAGCGGGCT 1078
                                                                                                                                                                                                        TGACTTGTGTGGCAAGAGCTGAAGGACTTGCAGGCCAGCAGTCT 728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C--GGGCACTTTATGAGGGTCTGAGTGTCCTGGAACTCA-CACACTGGGCAACGGGACCT 684
                                                                                                                                                                                                                                            TCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCTCCCCTCCCAAATCC 1018
                                                                                                                                                                                                                                                                              AGGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAAC 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Cleaver, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 http://image.llnl.gov
Plate: LLAM10635 row
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 602633817F1 NCI_CGAP_Skn3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BG740428.1 GI:14051081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                          227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e: LLAM10635 row: b column: quality sequence stop: 725. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="ImAGE:4778789"
/clone=lib="NCI_CGAP_SKn3"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: skin; Vector: pCMV-SPORT0; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT
Average insert size 1.5kb. Library constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
a 163 c 159 g 176 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 to 725)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Metazoa; Chordata; Craniata; Vertebrata; 
Sutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                                                                                                                                                                                                  22.9%;
                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                 Score 267.4; DB 12;
Pred. No. 2e-52;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 725 bp
3 Homo s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A linear EST 15-MAY-2001: CDNA clone IMAGE:4778789 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hominidae;
                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LLNL) DNA
                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                 616
                                                                                                                                     556
                                                                                                                                                                                                          496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ďŦ.
                                                                                                                                                                                                                                                                                                                                                 0;
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BB663870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: genome-resegsc.riken.go.jp,

RRL:http://genome.gsc.riken.go.jp,

Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,

M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.

Normalization and subtraction of cap-trapper-selected cDNAs to

prepare full-length cDNA libraries for rapid discovery of new

genes. Genome Res. 10 (10), 1617-1630 (2000)

wagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E.,

watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura

,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and

Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laboratory for Genome Exploration Research Group, RIKEN Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BB663870 RIKEN full-length enriched, 0 day neonate musculus cDNA clone E030016M12 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) Kondo,S., Shinagawa,A., Saito,T., Kiyosawa,H., Yamanaka,I., Aizav,K., Fikuda,S., Hara,A., Itoh,M., Kawai,J., Shibata,K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tagami, M., Tagawa, A., Takahashi, F., Takeda, Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arakawa,T., Carninci,P., Fukuda,S., Furuno,M., Hanagaki,T.,
Hiramoto,K., Hori,F., Ishii,Y., Ito,M., Kawai,J., Konno,H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
1 (bases 1 to 631)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human Genome Sequences. Mamm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hayashizaki,Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BB663870.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Computational Analysis of Full-Length Mouse cDNAs Compared with tuman Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Computer-based methods for the mouse full-length cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nouse mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Konno, H., Fukunishi, Y., Shibata, K., Itoh, M., Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       mouse
prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse tissues. 1st strand cDNA was
                                                                                                                                                                                                                                                                                                                                                                                                                                                       tissues.
                                                                                                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="E030016M12"
                                                                                                                                           /note="Site_1: SalI; Site_2: BamHI; cDNA library
                                                                                                                                                                     /dev_stage="0 day neonate"
/lab_host="DH10B"
                                                                                                                                                                                                                              /tissue_type="lung"
                                                                                                                                                                                                                                                                                     /clone_lib="RIKEN full-length enriched,
                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Arakawa, T., et al. 2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tanaka,T.,
                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIKEN Genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
lung
                                                                                                                                                                                                                                                                                     day neonate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Toya, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sugahara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hara, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aizawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus.
```

```
RESULT 2
BF784177
                                                                                                                                                    δÃ
                                                                                                                                                                                      В
                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
    ACCESSION
                                DEFINITION
                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                            746 CTGTGGTTCAGCTTCCAC 763
                                                                                                                                                     642 CTGTGATTCGGTGTCCCC 659
                                                                                                                                                                                                                                                                                                               568
                                                                                                                                                                                                                                                                                                                                            462
                                                                                                                                                                                                                                                                                                                                                                                                                                    342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162 TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                148 CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             328 TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222 TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                 TGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCA 641
                                                                                                                                                                                                                                                CGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACAACA-TGGGCAACGGGACCT
                                                                                                                                                                                                                                                                 CCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTT
                                                                                                                                                                                                                                                                                                             ATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGC
                                                                                                                                                                                                                                                                                                                                                                       TCACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                    TGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCAGCAAGTCCTTAACTGTCAA-CTGA
                                                                                                                                                                                                                                                                                                                                        ATATTTCCTGGGAGCTCGGTCTCGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                      TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTAACCAAATGGTGGTGGTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             436;
 602108039F1 NCI_CGAP_Kid14 Mus musculus cDNA clone IMAGE:4236489 5', mRNA sequence. BF784177
                                              BF784177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: SalI Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Priscilla Furth. NIH Reference for transgenic model: Li et al., Cell Grow and Differentiation 7, 3-11 (1996)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="tumor, gross tissue"
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="NCI_CGAP_Mam4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="IMAGE:4917803"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="NMRI"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .784
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26.2%;
70.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 306; DB 12;
Pred. No. 1.7e-61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      208 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                           794 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186 t
                                              mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 784;
                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                             EST 12-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cell Growth
                                                                                                                                                                                                                                                                                                               627
                                                                                                                                                                                                                                                                                                                                                                                                      461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            281
                                                                                                                                                                                                                                                                                                                                          521
                                                                                                                                                                                                                                                                                                                                                                         567
                                                                                                                                                                                                                                                                                                                                                                                                                                      507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SalI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                             В
                                                                                        рь
                                                                                                                     QΥ
                                                                                                                                                    ם
                                                                                                                                                                               Qy
                                                                                                                                                                                                                 DЬ
                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
QΥ
                                                        Qy
                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                     448
                                568
                                                                                          508
                                                                                                                        402
                                                                                                                                                                                  342
                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                              328
                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                          268
                                                                                                                                                                                                                                                                                                                                                                         162
                                                                                                                                                                                                                                                                                                                                                                                                       208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               405;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BF784177.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
```

```
102 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATG
CCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTT
                                                                                                                                                                                                                                                                                                                             CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCTGAAGG 101
                                                                                                                                                              TCACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGG
                                                                                                                                                                                                                                                                      CTGCCTTCCTCAGTGCAAGTCATGGGGGACCCTGAACATTCCTAGCAACAACCTTATAG
                                                                                                                                                                                                                                                                                                                                                                                    ATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGC
                                                                                                     ATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGC
                                                                                                                                                                                           TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLN49844 row: n column: 10 High quality sequence stop: 694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tissue Procurement: Jeffrey E. Green, M.D. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Rodentia; Sciurognath
1 (bases 1 to 794)
NIH-MCC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:4236489"
/clone_lib="NCI_CGAP_Kidl4"
/clone_lib="NCI_CGAP_Kidl4"
/lab_hOst="DB108 (T1 phage-resistant)"
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1:
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1:
Site_2: Sall; Cloned unidirectionally. Primer: Oli
Average insert size 1.75 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library. |"
a 214 c 215 g 179 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:12089213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 276.4; DB 1
Pred. No. 1.6e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches 176; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Site_1: NotI;
imer: Oligo dT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
581
                                                      627
                                                                                                          521
                                                                                                                                                              567
                                                                                                                                                                                                                     461
                                                                                                                                                                                                                                                                            507
                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                       447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
                                                                              ö
                                                                                                                                      score
and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB seq
  306
276.4
267.4
267.8
242
193.2
                                                                             Score
                                                                                                                                 d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                EST:*
1: em
2: em
3: em
                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16154066 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-729-264-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  April 28,
  26.2
23.7
22.9
22.0
20.7
16.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                agtgatcatggtggcaggag.....gtaatacaactgtagtatag 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                         gb_est1:*
gb_est2:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                           em_estov:*
                                                                                                                                                                                                                         em_gss_pln:*
em_gss_vrt:*
em_gss_fun:*
em_gss_mam:*
                                                                                                                                                                                                                                                                    gb_gss:*
em_gss_hum:*
em_gss_inv:*
                                                                                                                                                                                                                                                                                                                                                                                           em_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                      em_estro:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                  em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                             em_esthum: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_estba:*
                                                                                                                                                                                                                                                                                                                                                                                                                   em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                         em_estmu:*
                                                                                                                                                                                em_gss_pro:*
em_gss_rod:*
                                                                                                                                                                                                                                                                                                                                                gb_est3:*
                                                                                                                                                                                                     em_gss_other:*
                                                                                                                                                                                                                em_gss_mus:*
                                                                                                                                                                                                                                                                                                                  em_estfun:*
                                                                                                                                                                                                                                                                                                                                    gb_est4:*
                                                                                                                                                                                                                                                                                                       em_estom:*
                                                                                                                                                                                                                                                                                                                            gb_est5:*
                                                                              Length DB
  784
794
725
631
527
517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2003, 23:25:02; Search time 1894.29 Seconds
  12
12
10
10
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8097743376 residues
                                                                              Ħ
           BG863468
BF784177
BG740428
BB663870
BE032610
  BE476432
                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (without alignments)
9985.963 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32308132
BG863468 602796941
BF784177 602108039
BG740428 602633817
BB663870 BB663870
BE032610 132035 MA
BE476432 159670 BA
                                                                             Description
                                                                                                                                                                                                                                                                                             RESULT 1
BG863468
LOCUS
                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
  FEATURES
                                                                                                                                     COMMENT
                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                             0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                              AUTHORS
TITLE
JOURNAL
                                                                                                    Ph.
            High
                                                                                                                                                                                                                                       EST
```

6.3 622 17 AGG69679 6.3 677 17 AGG107877 6.3 677 17 AGG107877 6.5 9 524 10 AV601192 7 AGG107877 7 AGG107877 8 AGG173884 8 AGG177883 8 AGG1
2 17 AG069679 7 17 AG107877 AV601192 AA265274 AW990468 BG173684 BG173684 BG173684 BG173680 AI425363 BG236666 AI786300 AI425363 BG236666 AI786300 AI790785 AI71779 AI791783 BG206666 AI786300 AI790785 AI71779 AI7178300 AI790785 AI7183300 AI790785 AI71779 AI718410779 BB464577 BB464577 BB464577 BB4646577 BB4646701 AG447851 AG403719 AI648720 AI788973 BB531388 AI648720 AI788973 AI18831388 AW112084 AW112084 BB564363 BB564
AG069679 AG107877 AG107877 AG107877 AG107877 AV601192 AZ65274 AW990468 BG173684 AW990468 BG173684 AK008060 AI425363 BE376590 BB655217 BE376590 BB655217 AZ379623 BG206666 AI783300 AI790785 AZ411779 BB646577 BB646577 BB646577 BB646577 BB646577 BB646577 BF640046 AG142221 BB646133 BB4452873 BB4452873 BB4452873 BB446133 BB4452873 BB446133 BB4452873 BB446770 AI788973 BI454276 AI788973
G069679 G107877 V601192 265274 W999468 G10706060 425363 B625277 2379623 G2006666 799785 Z4111779 B140221 G142221 G142221 G14221 G14223 G206666 799785 F040701 G1422
Pan trogl Pan trogl Pan trogl AV601192 mx91d09.r uf37d05.y 602336823 Mus muscu mx51d09.y 601226419 BB625217 1M0134622 RST26117 1M0185804 BB46577 BP250004B Pan trogl BB46133 603171509 W95h05.rl a66f09.rl BB6619.rl BB646133 60317691 BB659.rl BB659.rl BB659.rl BB659.rl BB659.rl BB659.rl BB659.rl BB6531188 W75h05.rl

ALIGNMENTS

OCUS

OCANISH

MARA sequence.

OCORANISH

AUTHORS

TITLE

OCURNAL

CONTACT: Robert Strausberg

CONTACT: Robert Strausberg

Ph.D.

CONA Library Preparation: Life Technologies, Inc.

CONA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

DNA Sequencing by: Incyte Genomics, Inc.

Cond Library Arrayed by: The I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM10830 row: b column: 12

High quality sequence stop: 768.

EATURES

OCUS

OCUS

BOB63468

G2796941F1 NCI_CGAP_Mam4 Mus musculus CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM10830 row: b column: 12

EATURES

Db 121168 AGAGGCTCACCTCAACTGCACTGTGACTCATGGCCTGA 121205

Search completed: April 29, 2003, 14:10:30 Job time: 4555.27 secs

COMMENT

TITLE

```
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (09-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 9, 2002 this sequence version replaced gi:20503171. All repeats were identified using Pagastus-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * is believed to be correct as given, however the sizes
* of the gaps between them are based on estimates that have
* provided by the submittor
* This sequence will be replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 22 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the accession number will be preserved.

1 28835: contig of 28835 bp in length
28836 28935: gap of 100 bp
28936 29562: contig of 627 bp in length
29563 29662: gap of 100 bp
29663 30328: contig of 666 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                      36180 37483: contig of 1467 bp in length
37484 37583: gap of 100 bp
37484 37583: gap of 100 bp
37584 39166: contig of 1583 bp in length
39167 39266: gap of 100 bp
39267 41065: contig of 1583 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeats were identified using RepeatMasker:
t, A.F.A. & Green, P. (1996–1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequencing vector: Plasmid; n/a; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731 Consensus quality: 172188 bases at least Q40 Consensus quality: 172188 bases at least Q20 Consensus quality: 173133 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Insert size: 176000; agarose-fp
Insert size: 173761; sum-of-contigs
Quality coverage: 8.3 in Q20 bases; agarose-fp
Quality coverage: 8.4 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center project name: L20921
Center clone name: 147_E_11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the finished sequence as soon as it is available and
                                                                                                                    64080 64179: gap of 100 bp
64180 72619: contig of 8440 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30329 30428: gap of 100 bp
30429 32005: contig of 1577 bp in length
                                                                                                                                                                                                                                                                                                                                                      43204 43303:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2006 32105:
                                                                                                                                                                                                                     5 50704: gap
5 56370: r
                  81666: gap of
96774: contig
                                                                                                                                                                                                                                                                  41165: gap of 100 bp

43203: contig of 2038 bp in length

43303: gap of 100 bp

47489: contig of 4186 bp in length

47589: gap of 100 bp

50604: contig of 3015 bp in length
                                                                                                                                                                                                     56470:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33228:
                                                               81566; cont
                                                                                                                                                                   30370: contig of 5666 bp in 470: gap of 100 bp 64079: contig of 7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36079: ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            228: gap of 100 bp 34512: contig of 1284 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                   : contig of 7609 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              p of 100 bp contig of 1023 bp in length
                                                                    contig of 8847 bp in length
                       0f
100 bp
f 15108 bp in length
                                                                                            100 bp
                                                                                                                         in
                                                                                                                      length
                                                                                                                                                                                                                          length
```

```
Db 121108 TTCTGGATCCCGTTATCAGATCATAGACGGCCCTAAGAATATAACAGTCCTACAGGGCTC 121167
                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                             Matches
                                                                                          Query Match
                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                misc_teature
                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_reature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_teature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                              53
                                                                          Local
                TTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTC 112
                                                             1 Similarity
73; Conserv
                                                                                                                                         48903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119648 119747:
119748 147772
147773 147872:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .74558 174657: gap of 100 bp
174658 175861: contig of 1204 bp in length
                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30429. .32005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vector_side:left"
                                                                                                                                                                    clone_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone_end:SP6
                                                                                                                                                                                                                                                                                              96875.
                                                                                                                                                                                    /note="assembly_fragment
                                                                                                                                                                                                                                                                 119748
                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:1009
/clone="RP23-147E11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                               note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                    'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'clone_lib="RPCI-23 Female Mouse BAC"
. . .28835
                                                                                                                                                                                                                                                note="assembl
                                                                                                                                                                                                                                                                             note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                 note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment
                                                                                                                                                                                                                                                                                                          note="assembly_fragment'
                                                                                                                                                                                                                                                                                                                                        note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="assembly_fragment"
                                                                                                                                     ector_side:right"
39540 c 39029 g 46286 t
                                                                          4.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .175861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174557: ~~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119647: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      e="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1747: gap of 100 bp
47772: contig of 28025 bp in length
                                                                                                                                                                                                                                                                                              .11964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .36079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .41065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .34512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .30328
                                                                                                                                                                                                                                                                                                                                                                                                                       .64079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .43203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .39166
                                                                                                                                                                                                                                                                                                                                                          81566
                                                                                                                                                                                                                                                                                                                                                                                       72619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50604
                                                                                                                                                                                                                                                                                                                                                                                                                                                    56370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ap of 100 bp
contig of 26685 bp in length
ap of 100 bp
                                                             0;
                                                                           Score 58; DB 2;
Pred. No. 0.0043;
                                                                                                                                                                                                                                                .y_fragment
                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22773 bp in length
                                                             25;
                                                                                                                                         2103 others
                                                                                          Length 175861;
                                                             Indels
                                                             0;
                                                             Gaps
```

Qγ

113 CCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGA 150

0;

```
Query Match
Best Local Similarity
        Matches 100;
                                                                                 repeat_region
                                                                                                                                         repeat_region
                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
        Conservative
                                                                               /evidence=not_experimental
/rpt_family="MIR"
48905. . 49310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
/rpt_family="L2"
38477, .39376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="THE1B" 34563. .34620
                                                                                                                                         complement(48002. .48132)
                                                                                                                                                                                                                                                           complement(46792.
                                                                                                                                                                                                                                                                                                                                                                               complement(42332. .42710)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(42066. .42114)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(40243. .40542)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_unit-aaa
37518. .38158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(37064. .37364)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(36717. .36828)
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(36403. .36475)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(35924. .36345)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_unit=tttccagaaaagaatacgtactttaggca
complement(35785. .35824)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33468. .33678
/evidence=not_experimental
                                                                                                                                                          /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                       /evidence=not_experimental
                                                                                                                                                                                                                                                                             /evidence=not_experimental
/rpt_family="L1PB1"
                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
/rpt_family="L1PB1"
                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="homology = 98.40%, score = 29, counts =
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/rpt_family="Aluy"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="MER67C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
/rpt_family="MLT2CB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /evidence=not_experimental
/rpt_family="MLT2CB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
/rpt_family="MLT2CB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_type=tandem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="homology = 93.10%, score = 21, counts =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_type=tandem
8.5%; Score 100; DB 9;
100.0%; Pred. No. 3.3e-13;
tive 0; Mismatches 0;
                                                                                                                                                                                                                    _family="L1MA"
                                                                                                                                                                                                                                                                                                                    ement(42758. .46751)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _unit=aaaacacttcactttgtcttcaaaactgctc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="MLT1D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="MLT1D"
                                                                                                                                                                                                                                                                                                                                                                                                                                         . .42317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .37501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             experimental
                                        Length 199665;
      Indels
      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
    Gaps
    0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC120346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marguis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Stauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Zannou, T., Zambek, L., Zimmer, A., and Zody, M.
Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L.,
Houkhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J.,
Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A.,
Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S.,
Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N.,
Hagos, B., Horton, L., Hulme, W., Iliev, I., Grand-Pierre, N.,
Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C.,
Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R.,
Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G.,
MacClean, C., MacConald, P., Major, J., Marquis, N., Matthews, C.,
McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L.,
Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R.,
Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D.,
Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V.,
Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P.,
Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R.,
Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N.,
Topham, K., Travers, M., Travis, N., Trigilio, J., Vassiliev, H.,
Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W.J., Young, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 17654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (06-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA (bases 1 to 175861)
Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Muslidae; Lo 175861)

[ (bases 1 to 175861)

Birren,B., Linton,L., Nusbaum,C. and Lander,E.

Mus musculus, clone RP23-147E11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC120346 175861 bp
Mus musculus clone RP23-147E11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson,S., Barna,N., Bastien,V., Bloom,T., Boguslavkiy,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC120346.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:20514894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA linear HTG 09-MAY-2002 WORKING DRAFT SEQUENCE, 22 ordered
```

. '		Qy 280 TCCACAATGTGGAGCCCAGTGATCGGGGAACATCAGATCAGATCAGACTGCACCTAGAACAGTTGATCA 120299 Qy 280 TCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATCAGATCCAGAACAGTCGCC 339 D120298 TCCATGATGTGGAGCCCAGTGATTCGGGGAACATCAGATCCAGACAGTCGCC 339 Qy 340 TGCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATG 120239 Qy 340 TGCATGATGTGCAGCCCATGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATG 120239 Qy 340 TGCATGATCTGCCTTACCTTACCTTCCAGTGCAATGCAGCCTGCAGAACAGCCATG 120239 Qy 340 TGCATGATGTGCATCCGTCCAGTGCAAGTT 371 Db 120238 GGTTTGGATCTGCCTTCCTCTCAGTGCAAGTT 371 Db 120238 GGTTTGGATCTGCCTTCCTCTCAGTGCAAGTT 371 Db 120238 GGTTTGGATCTGCCTTCCTCTCAGTGCAAGGT 120207 RESULT 14 AF064857 AGF064857 AGF064857 AF064857 AF06
:		
repeat_region repeat_region repeat_region repeat_region repeat_region	repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region	
complement(2946230001) /evidence=not_experimental /rpt_family="MER34" complement(303083056) /evidence=not_experimental /rpt_family="MLT1B" 3101231364 /evidence=not_experimental /rpt_family="MLT1A2" complement(3250732738) /evidence=not_experimental /rpt_family="MSTD" complement(3276632980) /evidence=not_experimental /rpt_family="MSTD" /rpt_family="MSTD"	complement(229323201) /evidence=not_experimental /rpt_family="LIPA2" 2320223471 /evidence=not_experimental /rpt_family="MER39b" 2423324454 /evidence=not_experimental /rpt_family="MSTB-internal" 2445524889 /evidence=not_experimental /rpt_family="MSTB" complement(2543425767) /evidence=not_experimental /rpt_family="MSTB" 2593326294 /evidence=not_experimental /rpt_family="MER58B" 2599326294 /evidence=not_experimental /rpt_family="MER58B" 2599326294 /evidence=not_experimental /rpt_family="MER58B" 2722227283 /evidence=not_experimental /rpt_family="MIX" /evidence=not_experimental /rpt_family="MIX" /evidence=not_experimental /rpt_family="MIX" /evidence=not_experimental /rpt_family="MIX" /evidence=not_experimental	/evidence=not_experimental /rpt_family="MER58A" 86508823 /evidence=not_experimental /rpt_family="LIPA5" complement(1045610720) /evidence=not_experimental /rpt_family="L2" complement(1351413814) /evidence=not_experimental /rpt_family="AluSx" complement(18231416) /evidence=not_experimental /rpt_family="NER5A" complement(156215785) /evidence=not_experimental /rpt_family="NHE18" complement(1899419347) /evidence=not_experimental /rpt_family="NHE18" 1937819470 /note="homology = 81.70%, score = 28, counts /evidence=not_experimental /rpt_type=tandem /rpt_unit-agtatctattctgattgggcagtgctcatac complement(2037120556) /evidence=not_experimental /rpt_family="MER3" 2123121500 /evidence=not_experimental /rpt_family="NER3" 2229122567 /evidence=not_experimental /rpt_family="NER3" 2229122567 /evidence=not_experimental /rpt_family="NER3" /rpt_family="NER3" 2229122567

Center clone name: 147_E_11

Center code: WIBR Center: Whitehead

```
provided by the submittor.

This sequence will be replaced
by the finished sequence as soon as it is available and
the accession number will be preserved.

1 28835: contig of 28835 bp in length
28836 28935: gap of 100 bp
28936 29562: contig of 627 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTE: This is a 'working draft' sequence. It currently consists of 22 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the gaps between them are based on estimates that have
                                                                                                                                           72720 81566: contig of 8847 bp in 1
81567 81666: gap of 100 bp
81667 96774: contig of 15108 bp in
96775 96874: gap of 100 bp
96875 119647: contig of 22773 bp in
119748 119747: gap of 100 bp
119748 147772: contig of 28025 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequencing vector: plasmid; n/a; 100% of read Sequencing vector: plasmid; n/a; 100% of read Chemistry: Dye-terminator Big Dye; 100% of read Assembly program: phrap; version 0.960731 consensus quality: 159879 bases at least Q40 Consensus quality: 172188 bases at least Q20 Consensus quality: 173133 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Quality coverage: 8.3 in Q20 bases; Quality coverage: 8.4 in Q20 bases;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Insert size: 176000; agarose-fp
Insert size: 173761; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                    11166 43203: contig of 2038 bp in length
3204 43303: gap of 100 bp
3304 47489: contig of 4186 bp in length
7490 47589: gap of 100 bp
590 50604: contig of 3015 bp in length
605 50704: gap of 100 bp
705 56370: contig of 5666 bp in length
71 56470: gap of 100 bp
71 64079: contig of 7609 bp in length
30 64179: gap of 100 bp
72619: contig of 64079.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29662: gap of 100 bp 30328: contig of 666 bp in length 30428: gap of 100 bp 32005: contig of 1577 bp in length 32105: gap of 100 bp 33128: contig of 1023 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36079; contig of 1467 bp in length 179; gap of 100 bp 37483; contig of 1304 bp in length 183; gap of 100 bp 30166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39166: contig of 1583 bp in 66: gap of 100 bp 41065: contig of 100 bp
                                                                                                                                                                                                                                                                                                                                                 19: contig of 8440 bp in length
                                                                             ap of 100 bp contig of 26685 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  p of 100 bp contig of 1023 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       p of 100 bp
contig of 1284 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Institute/ MIT Center for Genome Research
                                                       ďď
                                                                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                              bp in length
                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agarose-fp
sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                    length
                                                          В
                                                                                                                  Qy
                                                                                                                                                                                Db 120478 CCTAAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGGGCTCACGGCTGGAAGCTTCTCA 120419
                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                   Db 120538 TTGCCTTCTAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGT 120479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 242; Conserv
                                                          120418 TGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCA 120359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_teature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                  160 TGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCA 219
                                                                                                                                                                                                               101 CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGT-CTCCCAGGGCTGGAAGCTCATCA 159
220 ATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCA 279
                                                                                                                                                                                                                                                                                                                                  41 TTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48903
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment" 64180. 72619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment"
34613..36079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vector_side:right"
39540 c 39029 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
174658. .175861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_fragment"
50705. .56370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment" 41166. 43203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_fragment" 39267. .41065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembly_fragment"
37584. .39166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembly_fragment"
147873. .174557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="assembly_fragment"
96875. .119647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="assembly_fragment"
81667. .96774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="assembly_fragment"
72720. .81566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_fragment" 56471. .64079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="assembly_fragment"
47590. .50604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment"
43304. .47489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_fragment"
32106. .33128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28936.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          vector_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="RP23~147E11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="RPCI-23 Female
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     15.1%;
72.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .32005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 29562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .30328
                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                      Score 177.6; DB 2;
Pred. No. 6.5e-32;
0; Mismatches 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46286 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2103 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BAC'
                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 175861;
                                                                                                                                                                                                                                                                                                                                                                                                                      <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

FEATURES

147873 174557: can 147873 174557: gap of 174558 175861: conti

Location/Qualifiers

contig of 1204

147773 147872:

174557: ~~ 7466~~

56371

72719:

41066

37583: 36179: 34612: 33228:

cont 36079: 34512:

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                       Q
                                                                                                                      δÃ
                                                                                                                                                                  밁
                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
В
                                                                                 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                        145
                                                                                                                                                                                                                                                                                                 144
                                         324
                                                                                                                                                                                                              204
                                                                                                                                                                                                                                                       205
                                                                                   325
                                                                                                                            264
                                                                                                                                                                    265
                                                                                                                                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                         ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC 323
                                                                                                                                                                                                                                                                                                                                                                CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                         GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                         GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 264
                                                                                                                                                                                                                                                                                               GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATG 203
                                                                                                                                                                                                                                                                                                                                                                                                                         GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 144
                                                                                                                                                                    GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                        CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 204
  CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAG 430
                                                                                   ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 10 Row: m Column: 23 This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: MGC help desk
Email: cgapbs-r@mail.n:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: Baylor College of Medicine Human Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gunaratne, P.H., Garcia, A.M., Lu, Yoon, V.S., Kowis, C.R., Lawrence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: amg@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www.hgsc.bcm.tmc.edu/cdna/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center code: BCM-HGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ы
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DSGSVQCSLQNSHGFGSAFLSVQDS1GEEGPALPTWAIILLAVAFSLLLILIIIVLIII
FCCCCASRREKEESTYQNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="LocusID:72058"
/translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
/translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Mammary tumor. Metallothionien-TGF alpha
model. 10 month old virgin mouse. Taken by biopsy."
/clone_lib="NCI_CGAP_Mam1"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="MGC:7960 IMAGE:3584645"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /protein_id="AAH04806.
/db_xref="GI:13435933"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="RIKEN cDNA 2010003D20 gene"
/protein_id="AAH04806.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    364 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 186; DB 10;
Pred. No. 4.6e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    378 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  X., Hulyk, S.W., Hale, S.M., S., Martin, R.G., Muzny, D.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC120346/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
```

```
RS Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colaugelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Ferreira, P., Fitchlugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Gaham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Liandarates, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., MacConald, P., Major, J., Marquis, N., Matthews, C., MacLean, C., MacConald, P., Major, J., Marquis, N., Matthews, C., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Mupyén, C., Nicol, R., Norbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Norbu, C., Norman, C.H., O'Ronnor, T., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Travis, N., Trigilio, J., Vassiliev, H., Diroct, Shhnission
                                                                                                                                                                                                                                                                                      RS Birren, B., Linton, L., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Brown, A., Camapelo, M., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Gord, S., Goyette, M., Gale, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Gale, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Gale, D., Galagan, J., Gardyna, S., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., MacCearthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C. H., O'Connot, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, M., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Travers, M., Travers, M., Travis, N., Trojailo, J., Vassiliev, H., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W. J., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC120346 175861 bp DNA linear HTG Mus musculus clone RP23-147E11, WORKING DRAFT SEQUENCE,
Submitted (09-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 9, 2002 this sequence version replaced gi:20503171.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (06-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus, clone RP23-147Ell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC120346.3 GI:20514894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pieces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 (bases 1 to 175861)
                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nmalia; Eutheria; Rou
(bases 1 to 175861)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 175861)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nusbaum, C. and Lander, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTG 09-MAY-2002
NCE, 22 ordered
```

http://ftp.genome.washington.edu/RM/RepeatMasker.html

```
LOCUS
DEFINITION
                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                  Qy
                 SOURCE
                                 KEYWORDS
                                                  VERSION
                                                                  ACCESSION
                                                                                                               AX380406
                                                                                                                                  RESULT 11
                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX380408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                     383
                                                                                                                                                                                                                    324
                                                                                                                                                                                                                                                     323
                                                                                                                                                                                                                                                                                      264
                                                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                                                                       204
                                                                                                                                                                                                                                                                                                                                                                                      203
                                                                                                                                                                                                                                                                                                                                                                                                                      144
                                                                                                                                                                                                                                                                                                                                                                                                                                                       143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                     ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                       GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                    GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                 GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 262
                                                                  Sequence 11
AX380406
                                                  AX380406.1 GI:19575336
                                                                                                 AX380406
                 house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B7-like molecules and uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleosto
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX380408.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 13 from Patent W00200710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             house mouse
musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO 0200710-A 13 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAD28222.1"
/db_xref="GI:19575339"
/db_xref="GI:19575339"
/translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
NCTVTHGWKLLMWTLNOMVVLSLTTQGPIITNNRFTYASYNSTDSFISELIIHDVQPS
NCTVTHGWKLLMWTLNOMVVLSLTTQGPIITNNRFTYASYNSTDSFISELIHDVQPS
NCSSYQCSLQNSHGFGSAFLSVQESTYQNEIRKSANMRTNKADPETKLKSGKENYGYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SDEAKAAQTASLPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:10090"
53. .724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Loca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
                                                                                from Patent W00200710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:19575338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        191 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ion/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 186; DB 6;
Pred. No. 4.4e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      168 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 754;
                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                 369
                                                                                               PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 203
                                                                                                                                                                                                                                                                                                                  322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
KEYWORDS
                                                                                                                                      REFERENCE
                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŽQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                       BC004806
                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
      REMARK
                                                                                                                                                                                                ORGANISM
                                                                                  JOURNAL
                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                   383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTCAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246;
                                    Submitted (21-MAR-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus (bases 1 to 1556)
                                                                                                                                                                                                                                                                                         Mus musculus, RIKEN of IMAGE: 3584645, mRNA,
NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                  Direct Submission
                                                                                                                      Strausberg, R.
                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                       BC004806.1
                                                                                                                                                                                                                                                                               BC004806
                                                                                                                                                                                                                                                                                                                                       BC004806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Welcher,A.A., Sarmiento,U.M., Schultz,H.J. and Chute,H.T. B7-11ke molecules and uses thereof Patent: Wo 0200710-A 11 03-JAN-2002; Amgen, Inc. (US)
                                                                                                                                                                                                                    nouse mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="Cad28221.1"
/db_xref="G1:19575337"
/translation="MECSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
/CTYTHGWKLLMWTLNQMVVLSLTTQGPIITNURFTYASYNSTDSFISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIII
FCCCCASRREKEESTYQNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTAS
LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPCKVRNVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                         1556 bp mRNA
RIKEN cDNA 2010003D20 gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             223 c
                                                                                                                                                                                                                                                                                             complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 186; DB 6;
Pred. No. 4.4e-34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         212 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                             cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 895
                                                                                                                                                                                                                                                                                                               clone MGC:7960
                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                   ROD 07-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; 1 (bases 1 to 196900)
DOE Joint Genome Institute.
Sequencing of Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                    Consensus quality: 164618 bases at least Q40
Consensus quality: 180887 bases at least Q20
Consensus quality: 180777 bases at least Q20
Estimated insert size: 147000; pulse field gel estimation
Estimated insert size: 193700; sum-of-contigs estimation
Quality coverage: 5.67 in Q20 bases; pulse field gel estimation
Quality coverage: 4.3 in Q20 bases; sum-of-contigs estimation.

* consists of 33 contigs. The true order of the pieces
The pieces of the pieces of the pieces of the pieces of the pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (10-JAN-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Jul 15, 2000 this sequence version replaced gi:6686457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----Genome Center
Center: Joint Genome Institute
Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unordered pieces
AC020851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC020851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center clone name: RPCI-21_467L12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center Project Name: 1437240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC020851.2 GI:9211212
HTG; HTGS_PHASE1; HTGS_
                                                                                                                                                                                                                                                                                                                                                                                                 arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                    as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 196900)
Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTGS_PHASE1; HTGS_DRAFT
                                                 24663
24763
27141
                                                                                        18493
21232
21332
                                                                                                                                                                       9279
11494
11594
13608
13708
                                                                                                                                             16047
                                                                                                                                                            15947
                                                                                                                                                                                                                                                                                           3493
3593
4739
                                                                                                                                                                                                                                                                                                                                  1542
1642
                                                                                                                                                                                                                                       4839
7249
7349
9179
                           30050:
                                                                                                                                                18392
                                                                                                                                                            1604
                                                                                                                                                                                                                                                                                                                                              1641:
                                                                                                                                                                                                                                                                                                                                                            1541:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196900 bp
RP21-467L12,
                                                                                                                                                                                                                                                                                                      gap of unknown contig of 1851 gap of unknown contig of 1146
                                                                                                                                                                                                                                                                           gap of contig
gap of
contig
gap of
                                     gap of contig gap of contig
                                                                                       gap of contig
                                                                                                                 gap of contig
                                                                                                                                             gap of contig
                                                                                                                                                                       gap of contig
                                                                                                                                                                                                gap of
contig
                                                                                                                                                                                                                           gap of contig
                                                                                                                                                                                                                                                    gap of contig
                                                                                                                                                                                                                                                                                                                                                          contig of 1541
                                                                                                                                                                       unknown
of 2239
                                                                                                                                                                                                unknown
of 2014
                                                                                                                                                                                                                                                                              i unknown
j of 2410
                                      unknown
of 2710
            unknown
of 2195
                                                               of 2378
                                                                                          of 3331
                                                                                                                    of 2739
                                                                                                                                  unknown
                                                                                                                                              of 2346
                                                                                                                                                            unknown
                                                                                                                                                                                                                            of 2215
                                                                                                                                                                                                                                       unknown
                                                                                                                                                                                                                                                     of 1830
                                                                                                                                                                                                                                                                   unknown
                                                                                                        unknown
                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA linear HTG
WORKING DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                              length
bp in
                                                                                          length
bp in
                                                                                                                                             length
bp in
                                                                                                                                                                                                                            length
bp in
                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                 bp in 1
             length
bp in 1
                                                                                                                                                                         ni da
                                                                                                                                                                                                                                                     bp in
                                                                                                                                                                                                                                                                                                         bp in
                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                   bp in
                                                                                                                                  length
                                                                                                                                                                                   Length
                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                     length
                                                                            ength
                                                               length
                                                                                                                                            length
                                                                                                                                                                      Length
                                                                                                                                                                                                length
                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                       length
             length
                                      length
                                                                                          length
                                                                                                                    length
                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTG 15-JUL-2000
NCE, 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus
                                                       밁
                                                                             δÃ
                                                                                                         밁
                                                                                                                                  δÃ
                                                                                                                                                              밁
                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                         Ωy
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                        Matches 242;
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    67436
                                                                                                        67616 CAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCAT 67675
    67736 GTTTGGATCTGCCTTCCTCAGTGCAAGGT 67766
                                                                                                                                                              67556
                                                                                                                                                                                                                 67496
                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                       161
                                                                               281
                                                                                                                                   221
                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                              GTGGGCTCTCAGTGACATGGTGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA 220
                                                                                                                                                                                                                               CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT 160
                                                                                                                                                                                                                                                                   TTGCCTTCTAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGT 67495
                             GCATGGATCTGCTTACCTTACCGTCCAAGTT 371
                                                                     CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT 340
                                                                                                                                  TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT
                                                                                                                                                            GTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAA
                                                                                                                                                                                                                TTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 100
                                                      CCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGG 67735
                                                                                                                                                                                                                                                                                                                                                                                        51456 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115896
126364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106228
106328
115796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126464
137190
137290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68025
68125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60228
60328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43681
46438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32346
35689
35789
                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40388
                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/db_xref="taxon:10090"
/clone="RP21-467L12"
/clone_lib="RPCI mouse PAC library 21"
/clone_lib="RPCI mouse PAC library 21"
/clone_1ib="RPCI mouse PAC library 21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .196900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   196900:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10632
                                                                                                                                                                                                                                                                                                                                   16.1%;
73.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of unknown length
contig of 9089 bp in 1
gap of unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of unknown contig of 20651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of unknown length contig of 15208 bp in gap of unknown length contig of 14363 bp in
                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                                                                      Score 188.6; DB Pred. No. 1.5e-34
                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        f unknown
y of 3647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 f unknown
g of 2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    f unknown
g of 4599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
of 9870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
of 8006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unknown
of 7697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
of 4288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of 5555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of 3093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown length
of 10468 bp in length
unknown length
of 10726 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         unknown length
of 9468 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of 10486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of 3343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of 9441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                 DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ni dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                         89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                 Length 196900;
                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                         Gaps
```

67555

ö

```
CDS
 repeat_region
                                                                     repeat_region
                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                    complement(9723. .9882)
/note="L2"
 complement(9989. .10077)
                                                                                                                                                                                            complement(8865. .8964)
/note="L2"
                                                                                                                                                                                                                                                                                complement(8482. .8762)
                                                                                                                                                                                                                                                                                                                                                 complement(6887. .7067)
                                                                                                                                                                                                                                                                                                                                                                                                      5542. .5829
/note="Alusx"
                                                                                      /rpt_family="SINE/Alu"
/rpt_type=DISPERSED
                                                                                                                        /note="AluSq"
                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="SINE/Alu"
/rpt_type=DISPERSED
                   rpt_type=DISPERSED
                                   rpt_family="LINE/L2"
                                                                                                                                                                            rpt_family-"LINE/L2"
                                                                                                                                                                                                                              /rpt_type=DISPERSED
                                                                                                                                                                                                                                              rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                /rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="21-Glutamic Acid Rich protein 21-GARP"
/protein_id="CAB90445.1"
/db_xref="G1:7717370"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(2496. .2878)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=DISPERSED 2398. .2495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /map="21q22.3"
/clone="BAC-291B3, 3' partial"
/clone_lib="BAC library"
                                                                                                                                                                                                                                                                  note="AluJo"
                                                                                                                                                                                                                                                                                                                                      note="L1MD3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Accession No. X93498"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Join(<3473. .3565,12649. .12678,15331. .15460,18739. .19157)
Jene="SH3BGR"</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                  rpt_family="LINE/L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                         number-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         translation="GSEKAEEGGETEAQKEGSEDVGNLPEAQEKNEEEGETATEETEE (AMEGAEGEAEEEETAEGEEPGEDEDS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="(TCCA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="THE1C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Accession No. AF064857"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oin(3473. .3565,12649. .12678,15331. .15426)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'rpt_family="LTR/MaLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="(TCTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="LINE/L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="L1M4"
                                                                                                                                                          __type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          type=TANDEM
                                                                                                                                             .9424
RESULT 9
AC020851
                                                              Db 268745 CATGGATCTGCTTACCTTACCGTCCAAGGTGTG 268777
                                                                                                                                                                                                                                                                       Db 268685 CACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTG
                                                                                                                                                                                                       Db 268625 GACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATC
                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Sim
Matches 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                               268445 TACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTC 268504
                                                                                                342 CATGGATCTGCTTACCTTACCGTCCAAGTTATG 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                       222 GACCGCTTCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                    282 CACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                 42 TTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(13115. .13425)
/note="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type=DISPERSED 11702. .11753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_type=DISPERSED complement(11315. .11556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14013.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(13598. .13892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(11002. .11282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(10430, .10651)
/note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type=DISPERSED complement(10078. .10429)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14013. .14131
/note="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LIPE_TYPE=DISPERSED
10980. .11000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="SINE/MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="L2"
/rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family-"SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="AluSp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="(TTTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="LTR/Malk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="THE1B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.3%;
97.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _type=DISPERSED
). .12678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 320.2; DB 9; Pred. No. 2.9e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 340000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                    341
                                                                                                                                                                                                        268684
                                                                                                                                                                                                                                                                                                                                               268564
```

0,

```
ġ
                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                   рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                             REFERENCE
                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                      HS21C080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 325; Conserv
                                                         AUTHORS
                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44265 TACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTC 44324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102 CTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                            342 CATGGATCTGCTTACCTTACCGTCCAAGTTATG 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42 TTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGGATCTGCTTACCTTACCGTCCAAGGTGTG 44597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTG 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACCGCTTCACCTCTCAGAGGTACGACCAGGGGGGGAACTTCACCTCGGAGATGATCATC 44504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAAT 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATG 44384
                                                                                                                                                                                         340000 bp DNA 1
Homo sapiens chromosome 21 segment HS21C080.
AL163280 AP001735 BA000005
AL163280.2 GI:7717369
Hattori,M., Fujiyama,Â., Taylor,T.D., Watanabe,H., Yada,T., Park,H.S., Toyoda,A., Ishii,K., Totoki,Y., Choi,D.K., Soeda Ohki,M., Takagi,T., Sakaki,Y., Taudien,S., Blechschmidt,K.,
                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 340000)
                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental complement(18643. 24647)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="GRAIL, score = 51.000%, comment = good shadow"
/evidence=not_experimental
complement(18397. .18584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
/rpt_family="AluSg1"
complement(18004. .18334)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="MER34"
complement(17633. .17969)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(18335. .18632)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Xpound exon prediction, score = 74% (0%)"
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="MZEF, score = 51.4%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="MZEF, score = 92.8%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(19228. .19361)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/rpt_family="HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/rpt_family="HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/rpt_family="LTR17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="GRAIL, score = 66.000%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27.3%;
97.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .21275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 320.2; DB 9 Pred. No. 2.8e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        comment = good"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 142742;
                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                           PRI 24-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                    Homo.
                              Soeda, E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (05-MAY-2000) The Chromosome 21 Mapping and Sequencing Consortium: * RIKEN Genomic Sciences Center, Human Genome Research Group * Institute of Molecular Biotechnology, Genome Analysis * Keio University School of Medicine, Dept. of Molecular Biology * GBF, Dept. of Genome Analysis * Max-Planck Institute for Molecular GBF, Dept. of Genome Analysis * Max-Planck Institute for Molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The Chromosome 21 Mapping and Sequencing Consortium consists of * RTKEN Genomic Sciences Center. Human Genome Research Group, *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polley, A., Menzel, U., Delabar, J., Kumpf, K., Lehmann, R., Patterson, D., Reichwald, K., Rump, A., Schillhabel, M., Schudy, A., Zimmermann, W., Rosenthal, A., Kudoh, J., Shibuya, K., Kawasaki, K., Asakawa, S., Shintani, A., Sasaki, T., Nagamine, K., Mitsuyama, S., Antonarakis, S.E., Minoshima, S., Shimizu, N., Nordsiek, G., Hornischer, K., Brandt, P., Scharfe, M., Schoen, O., Desario, A., Reichelt, J., Kauer, G., Bloecker, H., Ramser, J., Beck, A., Klages, S., Hennig, S., Riesselmann, L., Dagand, E., Wehrmeyer, S., Borzym, K., Gardiner, K., Nizetic, D., Francis, F., Lehrach, H., Reinhardt, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * e.mail: gscj-suk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sagamihara 228-8555, Japan,
* e.mail: sakaki@gsc.riken.go.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * URL: http://adenine.dmb.med.keio.ac.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tokyo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * URL: http://genome.imb-jena.de/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     * URL: http://hgp.gsc.riken.go.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * RIKEN Genomic Sciences Center, Human Genome Research Group,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genetics (addresses see below)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                info.genome@gbf.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * Keio University School of Medicine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yaspo, M.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GBF, Dept. of Genome Analysis,
Mascheroder Weg 1, D-38124 Bra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                okyo 160-8582, Japan,
e mail: shimizu@dmb-med.keio.ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           URL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Max-Planck Institute for Molecular Genetics, Ihnestrasse 73, D-14195 Berlin, Germany,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       URL: http://genome.gbf.de/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e.mail: info-chr21@molgen.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Institute of Molecular Biotechnology, Genome Analysis, utenbergstrasse 11, D-07745 Jena, Germany,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://chr21.rz-berlin.mpg.de/
  /clone="p206A10, 3' partial"
/clone_lib="RPCII,3-5 PAC library"
/note="Accession No. AF121782"
286628...>340000
                                                                                                                                                                                              /clone_lib="RPCI1,3-5 PAC library"
/note="Accession No. AF064860"
224137. .>340000
                                                                                                                                                                                                                                                                                                                                                                                          73410.
                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="P160L9, 5' partial"
/clone_lib="RPCI1,3-5 PAC library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /chromosome="21"
/map="21q22.3"
                                                                                            /chromosome="21"
/map="21q22.3"
                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                    /clone="P70I24"
                                                                                                                                                                                                                                                                                           /map="21q22.3"
                                                                                                                                                                                                                                                                                                                    /chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                              /note="Accession No. AF121897"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /map="21q22.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gscj-submit@genome.imb-jena.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .340000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .125946
                                                                                                                                                                                                                                                                                                                                                                                          .243533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Braunschweig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dept. of Molecular Biology,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Germany,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      * e.mail:
```

Application	repeat_region	repeat_region	repeat_region	repeat_region		exon	exon February	ropost	exon	exon	exon	repeat_region	repear_redion		repeat_region	repeat_region		exon	repeat_region	repeat_region	GACH	5	exon	repeat_region	repeat_region	exon	repeat_region	repeat_region
exon April April	complement(78198220) complement(78198220) /evidence=not_experimental /rpt_family="MLTIJ"	<pre>complement(75617696) /evidence=not_experimental /rpt family="MTR"</pre>	73477457 /evidence=not_experimental	69017339 /evidence=not_experimental /rpt_family="MLTIC"	="GenScan, score = 1.83%, comment = : 1 phase: 0" ence=not_experimental	<pre>"MZEF, score = ence=not_experin .6751</pre>	/evidence=not_experimental /rpt_family="HERVL" 6682 6751	<pre>"Xpound exon prediction, score = 70% ence=not_experimental</pre>	="GRAIL, score = 42.000%, comment = ence=not_experimental 4749	ence=not_experimental .4781	.3540) .3540) ore = 65.000%, comment =	3479. 3618 /evidence=not_experimental	JIZJ34/0 /evidence=not_experimental /rpt_familv="THE1B"	/evidence=not_experimental /rpt_family="MLTlJ"	/rpc_ramily="AluSx" 3012. 3122 /oridonocrot ornorimontal	26292831 /evidence=not_experimental /ext for="live" alice"	<pre>="GRAIL, score = 50.000%, comment = ence=not_experimental</pre>	LE" .1955)	/ Programming Fire (1780	complement(16931741) /evidence=not_experimental	00%, comment =	<pre>/note="MZEF, score = 66.1%" /evidence=not_experimental 1576 1770</pre>	<pre>/evidence=not_experimental /rpt_family="L2" 15761710</pre>	/rpt_family="MLTII" 14811603	/evidence=not_experimental 1114. :1403 /evidence=not_experimental	.1162) ore = 86.000%, comment =	<pre>complement(668881) (evidence-not_experimental /rpt_family="MER58A"</pre>	<pre>complement(140415) /evidence=not_experimental /rpt_family="MLT2E"</pre>
### A5.000%, comment = ### A5.000%, comment = #### A5.000%, comment = ###################################					g			(0%)"	rginal"												cellent"							,
### A5.000%, comment =																										:		
GRAIL, Score = 45.000%, comment = nce=not_experimental nent(8738.9232) wce=not_experimental silve=nent(973.9420) ment(973.9420) ment(973.9420) ment(973.9420) ce=not_experimental silve=not_experimental silve=trote sperimental silve=trote sperimental silve=trote sperimental silve=trote sperimental silve=trote sperimental silve=not_experimental silve=not_experime			repeat_region	exon		exon		exon		repeat_region	repeat_region		exon	repeat_region	repeat_region	*	exon		יים <i>במיר</i> דים אדרוו			repeat_region		repeat_region	exon	exon	repeat_region	exon
	/rpt_family="THEIA" 1720917632 /evidence=not_experimental	/rpt_family="MER34" /rpt_family="MER34" complement(1685117208) /evidence=not experimental	nce=not_experimental .16850	1A" .16655) re = 54.000%, comment =	nce=not_experimental .16768 nce=not_experimental	.15497) n prediction, score -	/evidence=not_experimental 1525515299 /evidence=not experimental	<pre>/rpt_family="LTR37A" /rpt_family="LTR37A" complement(14962 15036) /note="MyRFF scree 938"</pre>	<pre>/rpt_ramily="Alusx" complement(1431714614) /evidence=not experimental</pre>	<pre>complement(1361313908) /evidence=not_experimental</pre>	<pre>complement(1326013304) /evidence=not_experimental /rpt_family="L1MC2"</pre>	/note="MZEF; score = 76.1%" /evidence-not_experimental	/ev.wemce-mor_experimentar /rpt_family="Alusg" complement(1305713161)	/10c_tall1y= MAIIC 12902. 13180	Complement(123461282/) /evidence=not_experimental /rot_familv="Mrm1C"	/notte="MZEF, score = /9.4%" /evidence=not_experimental	<pre>/rpt_family="AluSg" complement(1152511777)</pre>	1150311818 /evidence=not_experimental	/rpt_family="LIMC/D"	/evidence-not_experimental /rpt_family-"MLT1F"	/evacence-normance- /rpt_family="MLT1E" 1066511028	<pre>/rpt_unit=ttcttgcacacttctctgttgagaggtcggttt 10244 . 10664 /avidence_not_experimental</pre>	score = 38,	ence=not_experimental	="GRAIL, score = 81.000%, comment =	.9420) ore = 71.000%, comment = 0.0000000000000000000000000000000000	complement(8/389232) /evidence=not_experimental /rpt_family="MITIC"	.8119 ="GRAIL, score = 45.000%, comment = ence=not_experimental

```
BASE COUNT
ORIGIN
     망
                                     Ş
                                                                              В
                                                                                                              Q
                                                                                                                                                     밁
                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                      οy
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
       563
                                       504
                                                                                                                  444
                                                                                                                                                       443
                                                                                                                                                                                                                                                                   324
                                                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                                                     204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTGATGCTTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                 TCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCT 563
                                                                                            CCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCAT 503
                                                                                                                                                 AACATTCCTAGCAACAACCTTATAGTCACTGAGGGTGAACCCTGTAATGTGACTTGCTAT 502
                                                                                                                                                                                   TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTA 443
                                                                                                                                                                                                                                                                                                                                                                                                                 GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
TCGAGTTACAATTCCTTTCTGGAGCCGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGAC 622
                                                                        GCCGTGGGCTGGACCTCACTCCCGGATATTTCCTGGGAGCTTGAGGTTCCCCGTAAGCCAT
                                                                                                                                                                                                                        CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCTCAGTGCAAGTCATGGGGACCCTG
                                                                                                                                                                                                                                                           ACCTCGGAGATGATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 142
                                                                                                                                                                                                                                                                                                                                                                            GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 9 from Patent W00200710. AX380404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amgen, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B7-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX380404.1 GI:19575334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO 0200710-A 9 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          molecules and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
3 304 c 291 g 287 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
NCTVPHSWKLLMWTLHQMVVLSLTTOGPIITNNRFTYASYNSTDSISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQVMGTLNIPSNNLIVVEGEPCNVTCYAVGWTSLPDI
SWELEVPVSHSSYNSFLSPGNEWRVLGVLDLTPLGNCTLTCVAELKDLQASKSLTVNL
TVVQPPPDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIIIFCCCCASRREKEESTY
QNEIRKSANNKTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
53. .1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="CAD28220.1"
/db_xref="GI:19575335"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.4%; 61.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 4.6e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 381; DB 6;
Pred. No. 4.6e-81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                        323
                                                                                                                                                                                                                                                                                                                                                                            322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4
```

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
AF121782
LOCUS
                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             λŠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                            JOURNAL
                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1044 GAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     564 CTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCAGCAACTCATCCACGGGTTTCCTTTGACATCGCCAGTCCTCAGAAGGTCAGAAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGTAGTATA 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTTTAGTGTA 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAGCAAGTCATCCACAGGCTTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACA 1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAAACGCAGCAGTA-----GCCTTCCTTATCAGGAACTCAATAAACATCAGCCCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAACAAAAGACCACAGACACCGCTTCTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCT 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGGCAAAGGCTGCACAGACTGCATCTCCCCTCCTAAATCTGCTGAAGTCAGCCTTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGCAGATCCGGAGACAAAGTTAAAAAGTGGAAAAGGAAAACTACGGGTACAGTTCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACTTATCAAAATGAAATAAGGAAATCTGCAAACATGAGGACAA------AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGCTGTAGAAGAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAATATTCTGTTGCTGTTGT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCATCATCCTGCTGGCAGTGGCCTTTTCCTTGCTCTTGATCCTGATCATTGTTTTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCAAGTCCTTAACTGTCAACCTGACTGTGTGTTCAGCCTCCACCTGACAGTATTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCACACCACTGGGCAACGGGACCTTGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCC
                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 142742)
1 (bases 1 to 142742)
1 Taudien, S., Dagand, E., Hildmann, T., Nordsiek, G., Drescher, B.,
Schattevoy, R., Weber, J., Schilling, M., Menzel, U., Yaspo, M.L. and
                                                                                                                                                                                                   Submitted (21-JAN-1999) Genome Analysis, Institute for Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens chromosome 21q22. AF121782
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF121782.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AF121782
                                                                                                                                                                                                                                             Submission
/rpt_family="MIR"
                     /evidence=not_experimental
                                                           /clone="PAC 206A10"
                                                                                                 /chromosome="21"
                                                                                                                                                                                  Location/Qualifiers
                                                                                                                    /db_xref="taxon:9606"
                                                                                                                                     organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:4210991
                                            .118
                                                                                                                                                                 .142742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142742 bp υ
ne 21q22.3 PAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----GCCTCCAGGAGAAAAAGGAAGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----AGGCCCAGCACTGCCGACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         206A10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 02-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  682
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
AX380402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                    δÃ
                                                                 Ъ
                                                                                                       QY
                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                         Matches 1103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   757
                           104
                                                                   30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAG
GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCTTCTCTCCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTCTTCTGCTGTAGAAGAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCT
                                                                                                            CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCCTCCTCACCAGCGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTTCTCTCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7 from Patent W00200710. Ax380402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B7-like molecules and uses thereof Patent: WO 0200710-A 7 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryota; M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Welcher, A.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX380402.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX380402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amgen,
                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                   290
                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inc.
                                                                                                                                                                                                                                                                                                  /ProteIn_id="Cad28219.1"
//Bi_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:19575333"
/db_xref="G1:1957533"
/db_xref="G1:195753"
/db_xref="G1:195753"
/db_xref="G1:1957533"
/db_xref="G1:195753"
/db_xref=
                                                                                                                                                                                                                                                                ILNKETVAVALLTSGLINVHPGQQQVIHRLLLIWPVLRRSVIQL"
300 c 283 g 266 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:19575332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sarmiento, U.M., Schultz, H.J. and Chute, H.T
                                                                                                                                                                             90.8%;
                                                                                                                                                         0;
                                                                                                                                                      Score 1067.4; DB 6;
Pred. No. 1.7e-246;
0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   đď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                         Indels
                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                         22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-MAR-2002
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           996
                                                                                                                                                         ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ,
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
         RESULT 6
AX380404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db
                                                                                              멍
                                                                                                                                  20
                                                                                                                                                                                 B
                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                            Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                              1088
                                                                                                                                                                                 1028
                                                                                                                                                                                                                          1064
                                                                                                                                                                                                                                                                                                             1004
                                                                                                                                                                                                                                                                     968
                                                                                                                                                                                                                                                                                                                                                          908
                                                                                                                                                                                                                                                                                                                                                                                                                                              870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         224 CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                   944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90 GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                           CGCTTCTCTCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG 1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                              TTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1138
                                                                                                                     TTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1174
                                                                                                                                                                                    TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC
                                                                                                                                                                                                        TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC 1123
                                                                                                                                                                                                                                                                       CGCTTCTCTCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                          GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                              AG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGAAGAAACAAAGAAACTGA 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCAGGCACCATGCTTCTGACGCCGACGTGTACTTACAATACGCTGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----GAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGA 907
```

749 763 689 703

869

967

629 643 583

569

523 449 463

509

403 329 343 269 283 209 223 149

389

```
REFERENCE
AUTHORS
                                                                                                 LOCUS
DEFINITION
ACCESSION
                                                                                                                              RESULT 4
AX380398
                                                           SOURCE
ORGANISM
                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                       밁
                                                                                                                                                                                       οy
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
TITLE
JOURNAL
                                                                                                                                                                       1196
                                                                                                                                                                                                                               1071
                                                                                                                                                                                                                                                   1076
                                                                                                                                                                                                                                                                      1011
                                                                                                                                                                                                                                                                                           1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 351
                                                                                                                                                                                                                                                                                                                                                                       968
                                                                                                                                                                                                                                                                                                                                                                                                                                771
                                                                                                                                                                                                           CCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACCAGGCTTCTTT 1130
                                                                                                                                                                                                                                                GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC 410
                                                                                                                                                                                                                                                                                        AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCT 1010
                                                                                                                                                                                                                                                                                                                                          ACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCGCCGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCC 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGAT 470
                                                                                                                                                                      AATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                 AATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                               TGTTGTGGCTGCAACTGCTGCTGCCGTTGTTCTGCTGTAGAAGAAAAAAAGAGGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
                                                                                                 Sequence
AX380398
         Welcher, A.A.,
B7-like molecu
                                                           Homo
Patent:
                                               Eukaryota;
                                                                                        AX380398.1
                                       Mammalia;
                                                           sapiens
 molecules and wo 0200710-A 3
                                                                                                         1168 bp
3 from Patent W00200710
                                     ; Metazoa;
Eutheria;
                   Sarmiento, U.M., Schultz, H.J.
                                      Chordata; Craniata; Vertebrata; Primates; Catarrhini; Hominidae;
 uses thereof
3 03-JAN-2002
                                                                                                                     DNA
                                                                                                                     linear
                                                                                                                                                                                         1175
                                                Euteleostomi;
                                                                                                                     PAT
                                                                                                                     18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                          890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                               1015
                                                                                                                                                                                                                                                                                                                                                                                                            895
                                                                                                                                                                                                                                                                                                                                                                                                                                830
                                                                                                                                                                                                                                                                                                                                                                                                                                                    835
                                                                                                                                                                                                                                                                                                                                                                      955
```

```
BASE CO
δõ
                         В
                                                QΥ
                                                                            В
                                                                                                       ΩV
                                                                                                                                   밁
                                                                                                                                                          δÃ
                                                                                                                                                                                        밁
                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                            Ş,
                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 1126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                          697
                                                                                                                                     577
                                                                                                                                                                                           517
                                                                                                                                                                                                                                               457
                                                                                                                                                                                                                                                                                                     397
                                                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                        337
                                                                                                                                                                                                                                                                                                                                                                                   344
                                                                                                                                                                                                                                                                                                                                                                                                              277
                                                                                                                                                                                                                                                                                                                                                                                                                                       284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      104
                                                                                                                                                                584
                                                                                                                                                                                                                                                                          464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37
                                                                                                                                  TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCT 103
                                                                                            TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                              CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                  TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGGGCTCCCAGGCTCGACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
 AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCCG
                                         ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                               TCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                              CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                            ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                        TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein_de"Cad28217.1"

/protein_de"Cad28217.1"

/protein_de"Cad28217.1"

/db_xref="GI:19575329"

/db_xref="GI:19575329"

/translation="Myacamenappeggggneviepponarvikgsoarfnctvsog
wkilmmalsomvutsvermepiitndretsorvogenercevtcles:wtwl.pdiswelgli
vshssyvevpersologavs.ilaltposngtltcvanwksika-ksavvnltvircpo
dtggginipgvlsslpsicfslptwgkvglglactmlkstpttttrcccrrrccgc
ncccrccpccrrrcpopxkseksktnkstetesonenscynsboxtttptaslp
pkscessdpeornsscgpphoradorpprpashpoasfnlaspekvsnttvv"
a 302 c 288 g 279 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="unnamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1122.4; DB 6
Pred. No. 9.7e-260;
0; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                     456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           156
                                                                                                                                      636
                                                                                                                                                                                           576
                                                                                                                                                                                                                                                                                                                              463
                                                                                                                                                                                                                                                                                                                                                                                   403
                                                                                                                                                                                                                                                                                                                                                                                                              336
                                                                                                                                                                                                                                                                                                                                                                                                                                         343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96
 823
                                                                                696
                                                                                                                                                                643
                                                                                                                                                                                                                                                516
                                                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

0;

```
BASE CO
         Š
                           В
                                            δõ
                                                              밁
                                                                               δÃ
                                                                                                   Д
                                                                                                                  δÃ
                                                                                                                                        В
                                                                                                                                                      γQ
                                                                                                                                                                            밁
                                                                                                                                                                                           δõ
                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                           γQ
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Si
Matches 1126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNT
                            1041
          949
                                                                981
                                                                                  829
                                                                                                     921
                                                                                                                                        861
                                                                                                                                                                             801
                                                                                                                                                                                               649
                                                                                                                                                                                                                                   589
                                                                                                                                                                                                                                                     681
                                                                                                                                                                                                                                                                                         621
                                                                                                                                                                                                                                                                                                          469
                                                                                                                                                                                                                                                                                                                              561
                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                    349
                                                                                                                                                                                                                                                                                                                                                                                                      441
                                                                                                                     769
                                                                                                                                                           709
                                                                                                                                                                                                                  741
                                                                                                                                                                                                                                                                       529
                                                                                                                                                                                                                                                                                                                                                                 501
                                                                                                                                                                                                                                                                                                                                                                                                                                          381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                       289
                                                                                                                                                                                                                                                                                                                                                                                                                                                           229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                           ACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGG
AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACACCGCTT
                                                              GTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTGTTTCTTCTGCTGTAGAAGAAAAAAGAGGAT
                                                                                                   GTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAG
                                                                                                                                                                                                                                                   CCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                       TGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCA
                                                                                                                                                                                                                                                                                                  ATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGC
                                                                                                                                                                                                                                                                                                                                      TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                          CTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAG
                                                                                                                                                                                                                                                                                                                                                                                                     TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                             TGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                                                                                                                                                                        ATATTTCCTGGGAGCTCGGTCTCGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGC
                                                                                                                                                                                                                                                                                                                             TCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="PLACE6017788"
/tissue_type="placenta"
/clone_lib="pLACE6"
/note="cloning vector: ph
a 463 c 474 g 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1125.4; DB 9
Pred. No. 1.9e-260;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1: pME18SFL3"
534 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
         1008
                          1100
                                                               1040
                                                                                                                                                                                                                                  648
                                             948
                                                                                888
                                                                                                   980
                                                                                                                     828
                                                                                                                                        920
                                                                                                                                                          768
                                                                                                                                                                            860
                                                                                                                                                                                              708
                                                                                                                                                                                                                 800
                                                                                                                                                                                                                                                    740
                                                                                                                                                                                                                                                                      588
                                                                                                                                                                                                                                                                                        680
                                                                                                                                                                                                                                                                                                          528
                                                                                                                                                                                                                                                                                                                             620
                                                                                                                                                                                                                                                                                                                                               468
                                                                                                                                                                                                                                                                                                                                                                560
                                                                                                                                                                                                                                                                                                                                                                                   408
                                                                                                                                                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                                                                         440
                                                                                                                                                                                                                                                                                                                                                                                                                                                           288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      108
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                    밁
                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
AX380400
                    ΔÃ
                                                                            Qy
                                                                                                           밁
                                                                                                                                Q
                                                                                                                                                              밁
 В
                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                          BASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                          COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1009
  356
                           291
                                                      296
                                                                                231
                                                                                                           236
                                                                                                                                  171
                                                                                                                                                                176
                                                                                                                                                                                       111
                                                                                                                                                                                                                   116
                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                            51
GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGC 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                                                                                                                                                                TCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC
                                                                                                                                                                                                                   GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGC 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAGAAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX380400
Sequence
AX380400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Welcher, A.A., Sarmiento, U.M., Schul
B7-like molecules and uses thereof
Patent: WO 0200710-A 5 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota;
Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX380400.1
                                                                                                                                                                                                                                                                                                                                          318
                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                          ø
                                                                                                                                                                                                                                                                                                                                     /POTEIN_id="CAD28218.1"
//Gb_xref="GI:19575331"
/translation="MERHLITVPEAVGSGSGNEVIEGPQNATVLKGSQARENCTVSQG
/translation="MERHLITVPEAVGSGSGNEVIEGPQNATVLKGSQARENCTVSQG
WKLIMWALSDAVVLSVPRMEPIITNDRETSQRXDQGGNETSEMIIHNVEPSDSGNIRC
SLQNSR.HGSAXITVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLPDISWELGLL
VSHSXYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQ
DTGGGINIPGVLSSLPSIGFSLPTWGKVGLGLAGTMLTPTCTLTIRCCCCRRRCCGC
NCCCRCCFCCRKRGFRIDTGOKKSEKEKTNKETETESGNENGGYNSDEQKTTETASLP
PKSCESSDPEQRNSSCGPPHQRADQRPPRPASHPQASFNLASPEKVSNTTVV"
a 319 c 305 g 298 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
80. ,1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Metazoa; Chordata;
Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:19575330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1240
                                                                                                                                                                                                                                                                                   95.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1240 bp
Patent W00200710
                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                   Score 1123.4; DB 6
Pred. No. 5.6e-260;
                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schultz, H.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chute, H.T
                                                                                                                                                                                                                                                                                                 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT
                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-MAR-2002
                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                  230
  415
                          350
                                                    355
                                                                                290
                                                                                                           295
                                                                                                                                                              235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1068
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
Š
                                       밁
                                                                        δÃ
                                                                                                                  В
                                                                                                                                                     Š
                                                                                                                                                                                              밁
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 1175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 GCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCCTCTCAGTGACATGG
    721
                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCCAGGCTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTCTGCCCATCTGAATAACAAGAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGT 60
                                                                                                                                                                                                                                                                                                                                                                             AACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGTCTGCCCATCTGAATAACAAGAGATGGGGGCTTGTGATTTTCCTCCACGGTTCTGGGT
  TAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTC
                                                                                                                                                                                                                     AAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGG
                                                                                                                                                                                                                                                                             AGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCCACCACAATGTGGAGCCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGA
                                                            GTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTT 720
                                                                                                                    CTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGT
                                                                                                                                                         CTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGT
                                                                                                                                                                                                                                                                                                                AGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTC
                                                                                                                                                                                                                                                                                                                                                          AACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGG
                                                                                                                                                                                                  AAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SYYFVPEPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTVIRCPQDTGG
GINIPGVLSSLPSLGFGSLFTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCNCCC
RCCFCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSC
ESSDPEQRNSSCGPPHQRADQRPFPASHPQASFNLASPEKVSNTTVV*
307 c 286 g 287 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="CAD28216.1"
/db_xref="G:1957327"
/db_xref="G:1957327"
/translation="MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSOGWKLI
/translation="MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSOGWKLI
MWALSDMVVLSVRPMEPIITNDRFTSQRYDQGGNFTSEMIIHNVEPSDSGNIRCSLQN
SRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLDDISWELGILVSHS
SRLHGSAYLTVQVMGELFIPSVNLVVAENEPCEVTCLPSHWTRLDDISWELGILVSHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 1175;
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5; DB 6;
2.1e-272;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                             660
                                                                                                                                                                                                                                          60C
                                                                                                                                                                                                                                                                                 54 C
                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                     600
                                                                                                                        660
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AK092516
                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 GCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721 TAGGTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTC. 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781 TGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACCGGCTTCTTTTAATCTGGCCA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCAAAAGAAATCTGAAAAAAGAGAAGAAACAAAGAAACTGAGACAGAAAGTGGAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGCTGATCAACGTCCACCCAGGCCAGCCAAGTCATCCACAGGCTTCTTTAATCTGGCCA: 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCAAAAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCCCCTCCCA
                                                           submitted (04-JUL-2002) Takao Isogai, FLJ Project(HRI Team): 2-6-7 kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan (E-mail:genomics@hri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986) NEDO human cDNA sequencing project supported by Mnistry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5'-& 3'-end one pass.sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and
                                                                                                                                                                                                                                                                                                                                                                              Oshima,A., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai,K:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S., Yamamoto,J., Isono Kawai-Hio,Y., Saito,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Kanda,K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oligo capping; fis (full insert sequence).
Homo sapiens placenta cDNA to mRNA, clone_lib:PLACE6 clone:PLACE6017788.
                                                                                                                                                                                                                                                                                                                                                                                                                             Wagatsuma, M., Murakawa, K., Kanehori, K., Takahashi-Fujii, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AK092516

Homo sapiens cDNA FLJ35197 fis,
                                                                                                                                                                                                                                                                                                                                                                NEDO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kawakami, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                           2 (bases 1 to 2051)
Isogai, T. and Yamamoto, J.
                                                                                                                                                                                                                                                                                                                                   Unpublished
                                          Evaluation; clone selection for full insert sequencing: HRI and
                          annotation: HRI and RAB.
                                                                                                                                                                                                                                                                                                                                                             human cDNA sequencing project
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sugiyama, A., Takemoto, M., Sugiyama, T., Irie, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA linear clone PLACE6017788,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pri 15-JUL-2002
highly similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isono,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .006
```

source

/organism="Homo sapiens" /db_xref="taxon:9606"

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
 US-09-729-264-1
1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   April 28, 2003, 23:25:03; Search time 3244.94 Seconds (without alignments) 10538.186 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ctgtctgcccatctgaataa.....gtaatacaactgtagtatag 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2054640 seqs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                         GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                           gb_htg:*
gb_in:*
em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:*
                                               em_htg_mus:*
em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
                                                                                                                                                                                                                                                                                                                            gb_pat:*
gb_ph:*
gb_p1:*
                                                                                                                                                         em_pat:*
em_ph:*
em_pl:*
                                                                                                                     em_un:*
em_vi:*
                                                                                                                                                                                      em_om:*
em_or:*
em_ov:*
                                                                                                                                                                                                                            em_fun:*
em_hum:*
em_in:*
                                                                                                                                                                                                                                                                   gb_sy:*
gb_un:*
gb_vi:*
                                                                                                                                                                                                                                                                                                gb_ro:*
                                                                                                                                                                                                                                                                                                                     gb_pr:*
                                                                                                                                                                                                                                                                                                                                                                                               gb_ba:*
                           em_htg_vrt:*
em_sy:*
                                                                                       em_htg_inv:*
em_htg_other:*
                                                                                                         em_htg_hum:*
                                                                                                                                       em_sts:*
                                                                                                                                                  em_ro:*
                                                                                                                                                                                                                     em_mu:*
                                                                                                                                                                                                                                                            em_ba:*
                                                                                                                                                                                                                                                                                                                                                          b_ov:*
                                                                                                                                                                                                                                                                                                                                                                   b_om: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4109280
```

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

4.5		c 43	42	41		٠ س	نب) د	c 37	·ω	ω	w	c 33	ω	w	w	29	28	- 	 	0 24	2	N)	c 21	N)	19	18	_	c 11	154	<u>م</u>	. ب				_			_				No.	Resul:	
49.4		49.4		49.4	2	49.	49.	49.	49.	ر ن	ហ	ហ	50.	50.	50.	50.	51.	л.	л U J .	52.	52.	(n		55.	56.	, n		, n	580	1// T	121	1.	18	188	320	320	7¢ 7001	1067.	1123	717	11	. Score	rt	
4.2	4.2	4.2	4.2	4.2	4.2		. 2	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	ے ب <u>د</u> ۔ ے ز	b	E.	4.5	4.5	4.7	•					4 0	•			5	16.1	7 :	٦:	S C	٠.	лυ	١,		Match	Query	φ
126	0685	33	7233	6238	880	6065	4984	117	29	48	7949	9467	9546	6567	4718	162971	57 C	 +	4540	4	3868	7805	106	90	42	N,	4020	9690	175861	7586	155	98	75	9690	႙္	4274	o i	3 F	7 7	2 (1	Length		
ν	w	ω	Ν	N	N	w	N	N	9	Ν	N	2	ν	N	9	N	S C	טת	s tu	· w	N	2	9	Ν	9	9	ا 0	N I	o u	o N	10	g	σ	N	φ,	ه م	ח ס	۰, د	ח ס	١v	0	DB		
AC095096	00379	0	12260														AC099238							AC120145	S	AF064860	AF045450	AC020851	AC120346	AC120346	BC004806	80406	AX380408	0	י מ	AF101780	AX380402	(>	‹≻	AK092516	\sim	ID		SUMMARIES
 960	003797 Drosophi	099016 Drosoph	122602 Rattus n	7840	18184	08188 Drosophi	00974 Mus mus	9166 Rattus n	131896 -Homo sa	108346 Rattus	113770 Rattus	128466 Rattus	129068 Rattus	113925 Rattus n	020589 Homo sa	103439	Southed By	EUU3536 Drosoph	703	09350	582	358 Rattus n	501 Homo sap	120145 Mus musc	3332 Human supe	6486	045450 Homo sa	020851 Mus mus	റ	120346 Mus mus	C004806	380406 9	380408 Sequence	20851 Mus musc	æοc	131793 Weguence	80402 S	ouses sequence	80400 Sequenc	92516 F	80396 Sequ			

Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. AX380396 1175 bp Sequence 1 from Patent w00200710. AX380396 AX380396.1 GI:19575326 DNA linear

:PAT 18-MAR-2002

Pred. No.

ŝ

the number of results predicted by chance to have

REFERENCE AUTHORS TITLE

JOURNAL

Welcher,A.A., Sarmiento,U.M., Schultz,H.J. and Chute,H.T. B7-like molecules and uses thereof Patent: WO 0200710-A 1 03-JAN-2002;

SOURCE ORGANISM

human

LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS

RESULT 1 AX380396

ALIGNMENTS

WPI; 2000-662424/64

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SXCCCCCCCXXXII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents a nucleotide sequence of the invention showing the the CAG tri-nucleotide repeats.
                         Claim 1; SEQ ID NO 1963;
                                                     interactions
                                                               New isolated nucleic acid
genes from Drosophila and
                                                                                                                                     Venter JC, Adams M,
                                                                                                                                                                (PEKE ) PE CORP NY
                                                                                                                                                                                           23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                    23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                27-SEP-2001
                                                                                                                                                                                                                                                                                          WO200171042-A2
                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                              pharmaceutical; gene; ds.
                                                                                                                                                                                                                                                                                                                                                            Drosophila; developmental biology;
                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster genomic polynucleotide SEQ ID NO 1963.
                                                                                                                                                                                                                                                                                                                                                                                                                   26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                              ABL16830;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABL16830 standard; DNA; 46954 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 403 BP; 121 A; 108 C; 105 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebellar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to the use of a plasmid vector array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Plasmid vector arraying neuropsychiatric gene more than copy number containing trinucleotide repeats its use thereof -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808 GCTGCTGCTGCCGCCGTCGTTGTTGTTGTTGCCAACTGCTGCTGCTGCCGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95 AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                           2001-656860/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAACAAAGAAACTGAGACAGAAAGTGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 12;
                                                                                                                                                                                           2000US-191637P
2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.4%;
                                                                                                                                     Ŀ
                      21pp + Sequence Listing; English
                                                                                                                                     PWD,
                                                                 detection reagent for detecting for elucidating cell signalling
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 51.8; DB 21 Pred. No. 0.00039;
                                                                                                                                     Myers
                                                                                                                                                                                                                                                                                                                                                           cell signalling; insecticide;
                                                                                                                                     EW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                 1000
and (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                 0 or more cell-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

Search completed: April 29, 2003, 11:04:24

time :

344.322 secs

The invention relates to an isolated nucleic acid detection reagent

```
밁
                                    QV
                                                                        В
                                                                                                            δÃ
                                                                                                                                                  Вþ
                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                Matches
                                                                                                                                                  16836 ACGATGCTGCCGATGATGTGGATGCTCTGGATGATGCTGCTGCTGCTGCAGATGCAA 16895
16956 AAAGTTACAATTTCAAAACAAAT 16978
                                                                          16896
                                                                                                                                                                                                                                                                                                                                          The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                   capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukarytes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                      Sequence 46954 BP; 13370 A; 9970 C; 9854 G; 13760 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                       (ABB57737-ABB72072)
                                                                                                                830
                                                                                                                                                                                        771 ACCATGCTTCTGACGCCGACGTGTACTCT-TACAATACGCTGCTGCTGCTGCCGCCGTCG 829
                                      TCGTATTCAATTTCAAAAGAAAT 912
                                                                          TTGCTGCCGCTGCTGCTGCTGCTGCTGCTGCAGTTGCGGATGCGGATGAGTGCA 16955
                                                                                                            91;
                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                4.2%;
63.6%;
                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                              Score 49.4; DB Pred. No. 0.022;
                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                  DB 23;
                                                                                                                                                                                                                            51;
                                                                                                                                                                                                                                                                Length 46954;
                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                  WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ę
```

1;

0;

```
RESULT 13
AAX89891/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion are known to be involved in a number of diseases including fragile x syndrome, spinocerebellar ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents
       Diagnosis of spinocerebellar ataxia type III (SCA III) syndrome using techniques which ensure highly accurate diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                 Spinocerebellar ataxia type III; SCAIII; reverse dot hybridisation; PCR-microplate hybridisation; PCR-MPH; trinucleotide repeat; TNR;
                                                  WPI; 1999-527634/44.
                                                                                                        (JIND/) JIN D K.
(SMSU ) SAMSUNG FINE CHEM CO LTD
                                                                                                                                                  26-FEB-1998;
                                                                                                                                                                             18-FEB-1999;
                                                                                                                                                                                                         02-SEP-1999.
                                                                                                                                                                                                                                     WO9943852-A1
                                                                                                                                                                                                                                                                                         repeat_unit
                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                     SCAIII syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Spinocerebellar ataxia type III (SCAIII) gene fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX89891;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX89891 standard; DNA; 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 389 BP; 107 A; 92 C; 91 G; 93 T; 6 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              been represented by an n to keep nucleotide numbering correct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a tri-nucleotide repeat related sequence #5 disclosed in the scope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Note; Nucleotides which were illegible in the specification have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This invention relates to the use of a plasmid vector array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            928 CAAACAAAGAAACTGAGACAGAAAGTGGAAATGAA 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          808 GCTGCTGCCGCCGCCGCCGTTGTTGTGGCTGCCAACTGCTGCTGCTGCTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58 AANTTAAAAGAANACCTACACCATGAGNTANAAAA 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAAGAGAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCTGTTGCTGCTGTCTGAAAACATTCAAAAGTGAAGTATATTTAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                   98KR-0006278
                                                                                                                                                                             99WO-KR00078
                                                                                                                                                                                                                                                                                       Location/Qualifiers 137..355
                                                                                                                                                                                                                                                                                                                                                                                       SS.
                                                                                                                                                                                                                                                            /note= "trinucleotide repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.48;
57.48;
                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 51.8; DB 21; Pred. No. 0.00038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
```

```
X P X N
                                                                                                                                                                                         SS ST FT ST
                                                                                                                                                                                                                                                                                                    RESULT 14
ABK10240/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 x 0 0 0 0 0 0 0 0 0 x 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to the diagnosis of spinocerebellar ataxia type III (SCAIII) syndrome using reverse dot hybridisation or PCR-microplate hybridisation (PCR-MPH). The method comprises attaching a potion of the SCAIII gene containing 73 copies of the trinucleotide (CAG) repeat unit (the present sequence) to a substrate, and hybridising with amplified testee genomic DNA containing copies of the trinucleotide units, PCR amplified with labeled primers (AAX89889-90). The new method is useful for diagnosis of SCAIII syndrome, and for determining the severity of the disease. The present sequence represents the SCAIII gene fragment
Jin DG;
                             (SMSU ) SAMSUNG MEDICAL CENT (JIND/) JIN D G.
                                                                             25-JUN-1998;
                                                                                                            25-JUN-1998;
                                                                                                                                                                         KR2000003004-A
                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                               spinocerebellar ataxia; X-linked spinobubar atrophy
                                                                                                                                                                                                                                                                                                                                                                                                            spinocerebellar ataxia type III; DRPLA; neuropsychiatric; hereditary hypertrophic cardiomyopathy; Marfan syndrome; dentatorubral and pallidoluysian atrophy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trinucleotide repeat sequence #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK10240 standard; DNA; 403
                                                                                                                                           15-JAN-2000
                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Trinucleotide repeat; fragile X syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 397 BP; 124 A; 104 C; 104 G; 65 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   containing 73 trinucleotide (TNR) repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 12-13; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 928 CAAACAAAGAAACTGAGACAGAAAGTGGAAA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             868 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAAATCTGAAAAAAGAGAAGA 927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             808 GCTGCTGCTGCTGCCGCCGTTGTTGTTGTGGCAACTGCTGCTGCCGTTGTTGTTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80 AACTTAAAAGAATAAATACACCATGAGAAAA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                             98KR-0024064.
                                                                                                            98KR-0024064.
                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 152..347
                                                                                                                                                                                                                                                                    /rpt_type=
152..154
                                                                                                                                                                                                                                    /note= "CAG type repeat"
                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                    TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 51.8; DB 20 Pred. No. 0.00039; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          867
```

0,

```
RESULT 11
ABL29756
ID ABL29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSCSSS
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents a nucleotide sequence of the invention showing the the CAG tri-nucleotide repeats
                                                                 useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABLG1840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                                     The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invent
                                                                                                                                                                                               Claim 1; SEQ ID NO 40741; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drosophila melanogaster genomic polynucleotide SEQ ID NO 40741.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABL29756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABL29756 standard; DNA; 7029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                       The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                                                                                       New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                        23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila;
                                                                                                                                                                                                                                                                                                          Venter JC, Adams M,
                                                                                                                                                                                                                                                                                                                                      (PEKE ) PE CORP NY
                                                                                                                                                                                                                                                                                                                                                                23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                    27-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                           ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAACAAAGAAACTGAGACAGAAAGTGGAAA 958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGCTGCTGCTGCCGCCGTCGTTGTTGTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA
                                                                                                                                                                                                                                      from Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  developmental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          вP;
                                                                                                                                                                                                                                                                                                                                                                2000US-191637P
200QUS-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80 A; 66 C; 62 G; 69 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.5%;
                                                                                                                                                                                                                                                                                                          Ľ
                                                                                                                                                                                                                                                                                                            PWD,
                                                                                                                                                                                                                                       detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 53.4; D
Pred. No. 0.00
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВР
                                                                                                                                                                                                                                                                                                          Myers
                                                                                                                                                                                                                                                                                                             뙆
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .00012;
wes 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              277;
                                                                                                                                                        The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   927
                                          WIPO
                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
```

Sequence 7029 BP; 1426 A; 1440 C; 1945 G; 2218 T; 0 other;

Disclosure; Fig 10; 23pp; Korean

```
ID XXX XXX ACC CALL A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δã
뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABK10248/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F1 F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Trinucleotide repeat; fragile X syndrome; ds;
spinocerebellar ataxia type II. DRPLA; neuropsychiatric
hereditary hypertrophic cardiomyopathy; Marfan syndrome;
dentatorubral and pallidoluysian atrophy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 spinocerebellar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tri-nucleotide repeat related sequence #5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABK10248;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABK10248 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5560 GCTGTATTTGCTAAAAAGAAGTAATCATTAATTTCCGGTAAAAA 5603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plasmid vector arraying neuropsychiatric containing trinucleotide repeats its use
                                                                                                     WPI; 2000-662424/64
                                                                                                                                                                                        (SMSU)
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                        25-JUN-1998;
                                                                                                                                                                                                                                                                                                  25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                       15-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                 KR2000003004-A
                                                                                                                                                 Jin DG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            808 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         868 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAA 911
                                                                                                                                                                                        SAMSUNG MEDICAL CENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                        98KR-0024064.
                                                                                                                                                                                                                                                                                                  98KR-0024064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note=
276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ataxia; X-linked spinobubar atrophy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       b
"Illegible :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
"Illegible in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 52.8; Db 22,
Pred. No. 0.00094;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neuropsychiatric;
                                            gene more
thereof -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              specification*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           specification'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                               than copy number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

```
Ş
                                                                                                                           밁
                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated B7-like (B7-L) polypeptide (I).

The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, and conditions including seminal conditions of B7-L polypeptides are consecutive disorders. Antibodies, soluble proteins comprising comprising consecution of the conditions and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in consecution of cancer cells based on the observation of consecution of consecution of cancer and cancers of (I) are useful for the treatment of consecution concer and cancers of hemanicopoletic system. B7-L polypeptide concer including seminal vesicle cancer, lung, brain, breast, ovarian, concertant because and cancers of the concertance of the concertance concertance
                                                                                                                                                                                                                                                                                                                                                               Matches 246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppræssive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 895 BP; 250 A; 223 C; 212 G; 210 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719
      203
                                                             144
                                                                                                                           143
                                                                                                                                                                                  84
                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                              24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                    GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-130881/17
GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA 262
                                                                                                                     CCTCAGAATGTAACAGTCCTAAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC
                                                                                                                                                                                                                                       GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        represents the coding sequence of mouse B7-L_m2
                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-214512P.
2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                     15.8%;
71.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MU,
                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                        Score 186; DB 24;
Pred. No. 3.6e-41;
                                                                                                                                                                                                                                                                                                                                                            Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                Length 895;
                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                         0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
ABK10239/c
            containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebella
                                                This invention relates to the use of a plasmid vector array
                                                                                            Plasmid vector arraying neuropsychiatric gene more than copy number containing trinucleotide repeats its use thereof \cdot
                                                                                                                                                          Jin
                                                                        Disclosure;
                                                                                                                                  WPI; 2000-662424/64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trinucleotide repeat; fragile X syndrome; ds; DRPLA; spinocerebellar ataxia type III; Marfan syndrome; hereditary hypertrophic cardiomyopathy; neuropsychiatric; dentatorubral and pallidoluysian atrophy;
                                                                                                                                                                              (SMSU ) SAMSUNG MEDICAL CENT (JIND/) JIN D G.
                                                                                                                                                                                                                   25-JUN-1998;
                                                                                                                                                                                                                                         25-JUN-1998;
                                                                                                                                                                                                                                                               15-JAN-2000
                                                                                                                                                                                                                                                                                      KR2000003004-A.
                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                           repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spinocerebellar ataxia; X-linked spinobubar atrophy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Trinucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABK10239 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                        Page 12; 23pp; Korean
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat sequence #2
                                                                                                                                                                                                                  98KR-0024064.
                                                                                                                                                                                                                                         98KR-0024064
                                                                                                                                                                                                                                                                                                                                                          /rpt_type=
198..200
                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= b
/note= "CAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 152..194
                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_type=
152..154
                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                            198..222
                                                                                                                                                                                                                                                                                                                                  /note= "CAG type repeat
                                                                                                                                                                                                                                                                                                                                                 /*taq=
                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                      type repeat"
                                                                                                                                                                                                                                                                                                                                                                      TANDEM
x syndrome, spinocerebellar cardiomyopathy, dentatorubra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         263
```

hereditary

hypertrophic,

dentatorubral

```
RESULT 8
ABK13034
ID ABK1
  conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricsis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a rogrowth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                    arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                              dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid
                                                                                                                                                                           seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoletic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Fig 7; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding mouse B7-like protein, B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK13034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK13034 standard; cDNA; 754 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                           useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention relates to an isolated B7-like (B7-L)
                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptide, polynucleotide encoding it and antibody against (I ul for treating B7-like polypeptide-related disease, disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
  as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 53..724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag=  a
/product= "B7-like protein, B7-L_m3"
immunosuppressive agents for bone marrow and organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MU,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide (I).
                                                                                                                                                                                                                                                                                                                         plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                           ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                are
```

```
RESULT 9
ABK13033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including atteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coellac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of mouse B7-L_m3
                                                                                                                                                                                                                 antiasthmatic; nephrotropic; antibacterial; virucide; tumour; reproductive disorder; graft versus host disease; autoimmune toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                         Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirhe antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                    endocrinopathy;
                                                                                                                                                                                                                                                                                                                                                                       DNA encoding mouse B7-like protein, B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK13033 standard; cDNA; 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                    WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143 CCTCAGAATGTAACAGTCCTAAAGGACTCAGAGGCTCACTTCAACTGCACCGTGACTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84 CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24 GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCGGATCCAGTTATCAGATCATAGAAGGT 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCAGAACAGCCATGGGTTTGGATCTGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                754 BP; 220 A; 191 C; 175 G; 168 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                      lymphoproliferative disorder; gene; ss
                                                                                                           Location/Qualifiers 53..865
                                                                         /product= "B7-like protein, B7-L_m2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 186;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 24;
3.2e-41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                     antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                            disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
1094
                                                                                      1040
                                                                                                                                     1044
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         144
                                                                                                                                                                                                                                                                      920
                                                                                                                                                                                                                                                                                                                   924
                                                                                                                                                                                                                                                                                                                                                                874
                                                                                                                                                                                                                                                                                                                                                                                                                                                    827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTA 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGT 683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCAGAACAGTCGCCTGCATGGATCTGCTTACCGTTACCGTCCAAGTTATGGGAGAGCTG 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACCCATCATCACCAACAACCGCTTCACCTATGCCAGTTACAACAGCACTGACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCAACTCATCCACGGGTTTCCTTTGACATCGCCAGTCCTCAGAAGGTCAGAAATGTG
                                                                                                                                                                                                                                                                                              AAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGAT
                                                                                                                                                                                                                                                                                                                                                                                                       TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCATCATCCTGCTGGCAGTGGCCTTTTCCTTGCTCTTGATCCTGATCATTGTTTTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTAATATTCCAGGTGTATTATCAAGTTTACCGAGTTTAGGTTTTCATTGCCTACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCACACCACTGGGCAACGGGACCTTGACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGAGTTACAATTCCTTTCTGGAGCCGGGCAACTTTATGAGGGTCTTGAGTGTCCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAGCTATTATTTTGCTTCCGGAGCCCAGCGGACCTTCAAAGTGCAGTGAGCATCCTGGCT 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCGTGGGCTGGACCTCACTCCCGGATATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCAT 503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACATTCCTAGCAACAACCTTATAGTCACTGAGGGTGAACCCTGTAATGTGACTTGCTAT 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGCAGAACAGCCATGGGTTTTGGATCTGCCTTCCTCTCAGTGCAAGTCATGGGGACCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTCGGAGTTGATCATCCATGATGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCGGAGATGATCCACCAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCCCATCATCACCAATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTC 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCTGGAAGCTTCTCATGTGGACTCTTAACCAAATGGTGGTGCTGAGTCTCACCACCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAG 143
                                          CCAGCAAGTCATCCACAGGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACA 1163
                                                                                                                                 GAACAAAGAAACAGTAGCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGG
                                                                                                                                                                                GAACAAAAGACCACAGACACCGCTTCTCTCCCCCCAAATCCTGTGAATCCAGTGATCCT 1043
                                                                                                                                                                                                                                                                                                                                                             TACTTATCAAAATGAAATAAGGAAATCTGCAAACATGAGGACAA-----AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAATATTCTGTTGCTGTTGT-------GCCTCCAGGAGAAAAGGAAGAATC
                                                                                      GAAAAACGCAGCAGTA-----GCCTTCCTTATCAGGAACTCAATAAACATCAGCCCGGT
                                                                                                                                                                                                                                                                      AAAGCAGATCCGGAGACAAAGTTAAAAAGTGGAAAAGGAAAACTACGGGTACAGTTCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAAGTCCTTAACTGTCAACCTGACTGTGGTTCAGCCTCCACCTGACAGTATTGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----AGGCCCAGCACTGCCGACCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             262
  1153
                                                                                                                                   1103
                                                                                                                                                                                1039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               382
                                                                                                                                                                                                                                                                                                                   983
                                                                                                                                                                                                                                                                                                                                                                                                          923
                                                                                                                                                                                                                                                                                                                                                                                                                                                    873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         203
                                                                                                                                                                                                                                                                         979
                                                                                                                                                                                                                                                                                                                                                                919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               682
```

망 Q В QΥ 밁 QΥ Вр QΥ 멍 ρy 밁 20 밁 Š В ρ Вþ Ωy 밁 QΥ В Ş В Qy 밁 Š Вþ δÃ 밁 δÃ 밁 Q

25 da da

```
RRESULT 7
AAI36582
IID AAI36
AC AAI3
XX AAIA
AC AAI3
XX Prob
TY 17-C
DT 17-C
DT 17-C
DT 09-A
XX Prob
XX Prob
XX Prob
XX Prob
XX Prob
XX AAI3
XX Prob
XX Prob
XX Prob
XX Prob
XX Home
XX To The
XX The
CC The
CC The
CC Coroo
CC Cxp
CC Cx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
  밁
                                               QΥ
                                                                                                   Db
                                                                                                                                             QУ
                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-AUG-2000;
21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-FEB-2000;
26-MAY-2000;
30-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 401 BP; 105 A; 98 C; 111 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human genome-derived single exon nucleic acid probes useful analyzing gene expression in human placenta - \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-488897/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200157272-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Probe; microarray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Probe #5268 used to measure gene expression in human placenta sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAI36582 standard;
     382
                                                 222
                                                                                                      322
                                                                                                                                                        162
                                                                                                                                                                                                         262
                                                                                                                                                                                                                                                        102
                                                                                                                                                                                                                                                                                                          202
                                                                                                                                                                                                                                                                                                                                                         42
ACTGTAGTATA 1174
                                                                                                                                                                                                                                                                                                                             TTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTC 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTITAGIGIA 1164
                                                                                                                                                                                                       CTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,
BS
                                                                                                                             TGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAAT
                                                                                                                                                                                                                                                                                                          TACCTTCCAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGTC
                                                                                                      TGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCCATCATCACCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID No 5268; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0207456.
2000US-0608408.
2000US-0632366.
2000US-06323687.
2000US-0234687.
                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001WO-US00663.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000GB-0024263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-0180312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human; placenta; antenatal diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                   16.2%;
97.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                           Score 190.4; DB 2
Pred. No. 1.4e-42;
0; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rank DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22; Length
                                                                                                                                                                                                                                                                                                                                                                                                              6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             401;
                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                           381
                                                                                                                                                             221
                                                                                                                                                                                                         321
                                                                                                                                                                                                                                                           161
                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 6
ABK13032
g
                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                         antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer;
reproductive disorder; graft versus host disease; autoimmune disease;
toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                            Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antithe antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                endocrinopathy;
                                                                                                                                        DNA encoding
                                                                                                                                                                                                                                                                                                                                              1009
                                                                                                                                                                                                                ABK13032 standard; cDNA; 1195
                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                            949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  819
                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                           898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       519
                                                                                                                                                                                                                                                                                                                      CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAGAAGAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCTCACCAGAGAAGACATAGACCT 1046
                                                                                                                                                                                                                                                                                                CTCCTCACCAGCGGGCTGATCAACGT 1094
                                                                                                                                                                                                                                                                                                                                                                   AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                  AATGGCGTCATTTTGTGTATACTCATTTATGTCTGCCTTCTTGAGCCTCTCACTGTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAAGAGGATTTCGTATTC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTAAATCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGGGACTTTGACTTGCGTGGCTACCTGGAAGACCCTGAAGGCCCGCAAGTCTGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                        mouse B7-like protein,
                                                                                                                                                                (first entry)
                                 lymphoproliferative
                                                                                                                                       87-L_m1.
                                 disorder;
                                                                                                   antirheumatic;
                                                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                              1068
                                                                                                                                                                                                                                                                                                                                                                                           1008
                                                                                                                                                                                                                                                                                                                                                                     960
                                                                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
```

δõ

망 Q

83

24

GAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGC GTGCTGGTCATCCTGGCTCAGCTGACAGCTTCCCGGATCCAGTTATCAGATCATAGAAGGT

Best Loc Matches

Local Similarity nes 712; Conserv

Conservative

32.4%; Α,

Score 381; DB 24; Pred. No. 3.4e-95; Mismatches

Length

Indels

69;

Gaps

4

83

Sequence

BP;

304 C;

291 G;

```
seminal vesicle hyperplasia in transgenic mice overexpressing B7-L college, Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with ciseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashmoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                                                     are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic above conductors of the conductor of the conductor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) a useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                     shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU75544
          1195
                                                                        represents the coding sequence of mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5; 135pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers 53..1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /product= "B7-like protein, B7-L_m1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
          313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ,
287 T; 0 other;
                                                                        B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are
```

in

```
RESULT 5
AAS92356
IID AASS
XX
AAA
AAS
AC AASS
XX
DT 13-F
DT 13-F
DT DNA
XX
DE DNA
XX
DE DNA
XX
COS HOMC
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                        ρ
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΩY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                             1028
                                                                                                                                                                                                                                                                                                                                                                                                                            1004
 Homo sapiens
                                                                                                                13-FEB-2002
                                                                                                                                                                             AAS92356 standard; cDNA; 1392 BP
                                                                              DNA encoding novel human diagnostic protein #28160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  344
                                food supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                           908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      704
                                                                                                                                                                                                                                                                             TTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGATCTGCTTACCCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAATCT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA 329
                                                                                                                                                                                                                                                                                                                                                           CGCTTCTCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                           CGCTTCTCTCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGATTTCGTATTCAAATTTCAAAAGAAATCTGAAAAAAGAGAAGAAGAACAAAGAAACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGTCGTTGTTGTGGCCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG 583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT 389
                                                                                                                                                                                                                                                              TTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1138
                                                                                                                                                                                                                                                                                                                             AG------GAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTCTTCTGCTGTAGAAGAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCAAGTTTACCGAGTTTAGGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                 chromosome mapping;
                                                                                                              (first entry)
                                medical imaging; diagnostic; genetic
                                               gene mapping; gene therapy;
                                 disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     449
                                                                                                                                                                                                                                                                                                                             1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569
                                                                                                                                                                                                                                                                                                                                                                                                                            1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      509
                                                                                                                                                                                                                                                                                                                                                                                             1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                           967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       809
```

```
Qy
                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δã
                                                                                              Вb
                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to isolated polynucleotide (I) and CC polypeptide (II) sequences. (I) is useful as hybridisation probes, CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC polynucleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC for identifying expressed genes. (I) is useful in gene therapy techniques CC (II), (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as CC a food supplement. (II) and its binding partners are useful in medical CC imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC The polypeptide and polypncleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification of mutations CC responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC specification, but was obtained in electronic format directly from WIPO cast first the content of the training of the content of the printed of the content of the content of the printed of the content of the cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess beddings.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1392 BP; 338 A; 361 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HYSE-) HYSEQ INC.
                                                                                              181
                                                                                                                                              339
                                                                                                                                                                                              121
                                                                                                                                                                                                                                               279
                                                                                                                                                                                                                                                                                                                                          219
                                                                                                                                                                                                                                                                                                                                                                                                                 159 ATGTGGGCTCTCAGTGACATGGTGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACC
                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
nes 913; Conserv
                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                              CTGCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTT
                                                                                                                          CTGCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGATGTTCATTCCCAGTGTT
                                                                                                                                                                                              ATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC
                                                                                                                                                                                                                          ATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC
                                                                                                                                                                                                                                                                                               AATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC
                                                                                                                                                                                                                                                                                                                      AATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC
                                                                                                                                                                                                                                                                                                                                                                                          ATGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-639362/73
AATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID No 28160; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0540217
2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 779.2; DB 23; Pred. No. 1.3e-205; 0; Mismatches 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         341 G; 352 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels 110; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        techniques
                                                  458
                                                                                                                                              398
                                                                                                                                                                                                                                                                                                                                               278
                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                 180
                                                                                                                                                                                                                                                                                               120
```

20 맑

459 241

CGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTT

300

۳.

```
Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                 Human; B7-like protein; B7-L; antiinfertility; gynaecological; antiinfmour; cytostatic; immunosuppressive; antiarthritic; antirheumat antiinflammatory; dermatological; antipscriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
          28-JUN-2000;
28-NOV-2000;
                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1057
                                                 28-JUN-2001;
                                                                                                    WO200200710-A2
                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1064
                                                                                                                                                                                                                                                                                                                                 DNA encoding human B7-like protein, B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTTCTCCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-214512P
2000US-0729264
                                                 2001WO-US20719
                                                                                                                                                     Location/Qualifiers
1..1134
                                                                                                                            /product=
                                                                                                                                        /*tag=
                                                                                                                          "B7-like protein,
                                                                                                                            B7-L_h4"
                                                                                                                                                                                                                                                                                             antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763
```

```
Qγ
                                                                                               δÃ
                                                                                                                                                      Db
                                                                                                                                                                                                  QУ
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 1103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L dependent B-cell mediated diseases and autoimmune diseases. B7-L diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory boxed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfissions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, discretes conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a roluprotth and maintenance of cancer cells based on the observation of growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1139 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC
     284
                                                      210
                                                                                                                                                      150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .nflammatory bowel disease (Crohn's disease and ulcerative colitis),
                                                                                                                                                                                                    164
                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                                                                                               44 CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCT 103
                                                                                                                                                                                                                                                                                                                                                        30
                                                                                                                                                                                                                                                                             GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG 163
CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                           CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                          GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                 CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACCTCACCTCGGAGATGATCATCCA
                                                                                                                                                   GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                                                                                                                                                                                                                   GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
                                                                                                                                                                                                                                                                                                                                                     CCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               represents the coding sequence of human B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig 4; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                relates to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     290 A; 300 C; 283 G; 266 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1067.4; DB 2*
Pred. No. 1.3e*285;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           isolated B7-like (B7-L)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schultz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , LΉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24; Length 1139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptide (I).
ibody against (I)
ease, disorders or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                        22:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                   209
                                                                                                                                                                                                                                                                                                                                                     89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    are
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABK13029
The polypeptide, polynucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
antiasthmatic; nephrotropic; antibacterial; virucide; tumour; ca
                                                                                                                                                             Claim 1;
                                                                                                                                                                                       proliterative
                                                                                                                                                                                                               New B7-like polypeptides, polynucleotides and their modulators,
                                                                                                                                                                                                                                                                                          Welcher AA,
                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200200710-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA encoding human B7-like protein, B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK13029 standard;
                                                                                                                                                                                                      diagnosing,
                                                                                                                                                                                                                                                                 2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTT 1130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCT 1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCT 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU75541.
                                                                                                                                                           Fig 2; 135pp; English.
                                                                                                                                                                                                                                                                                          Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                       INC
                                                                                                                                                                                         disorders,
                                                                                                                                                                       preventing and --
preventing and --
preventing and --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8..1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "B7-like protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA;
                                                                                                                                                                                                                                                                                          MD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ิฌ
                                                                                                                                                                                                   and treating
                                                                                                                                                                                                                                                                                          Schultz HJ,
                                                                                                                                                                                       ing reproductive, immune and
and arteriosclerosis -
                                                                                                                                                                                                                                                                                          Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B7-L_h2"
                                                                                                                                                                                                                                                                                          HT;
             a role
າ of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1195
                                                                                                                   are
```

```
Qγ
                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                      Qy
                                                                                                                                                                                  В
                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                        Д
                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 1126;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), a Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of disease involving abnormal cell consideration in the colorest and survival as the colorest and transplantation of disease involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (1) are useful for the treatment of cancer including seminal vesicle cancer lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid autoimmune diseases such as systemic lupus erythematosus, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1168 BP; 299 A; 302 C; 288 G; 279 T; 0 other;
                                             584
                                                                                          517
                                                                                                                                     524
                                                                                                                                                                                  457
                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                          397
                                                                                                                                                                                                                                                                                                                       404
                                                                                                                                                                                                                                                                                                                                                                    337
                                                                                                                                                                                                                                                                                                                                                                                                               344
                                                                                                                                                                                                                                                                                                                                                                                                                                                               277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37
                                                                                                               GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATAGG
                                                                                                                                                                                                       CCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                                                  TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTCCACGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCT
GACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAA
                                                                                                                                                                                                                                                                                                                                                                                            TGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCTCTCAGTGACATGGTGGTGCTAAGCCTCAGGCCCATGGAGCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCCACCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCT
                                                                                                                                                                                  CCCGGATATTTCCTGGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCC
                                                                                                                                                                                                                                                                        TGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTGGCT
                                                                                                                                                                                                                                                                                                                                                                  TGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCCATCATCACCAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTG
                                                                                          GGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95.5%;
99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 1122.4; DB 24
Pred. No. 7.4e-301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 24; Length 1168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      various pneumopathies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103
    636
                                               643
                                                                                            576
                                                                                                                                       583
                                                                                                                                                                                       516
                                                                                                                                                                                                                                                                                                                          463
                                                                                                                                                                                                                                                                                                                                                                       396
                                                                                                                                                                                                                                                                                                                                                                                                                  403
                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      163
                                                                                                                                                                                                                                                                            456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
cc useful for enhancing the immune response to tumours. (I) plays a role in cc growth and maintenance of cancer cells based on the observation of cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L cc polypeptide. Hence modulators of (I) are useful for the treatment of cc cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cc testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response cc in allograft transplantation, graft versus host disease, T-cell cdependent B-cell mediated diseases and autoimmune diseases. B7-L cc molecules are useful for alleviating the symptoms associated with cc diseases involving chronic immune cell dysfunction or to treat cattoimmune diseases such as systemic lupus erythematosus, rheumatoid carthritis, multiple sclerosis, diabetes, immune thrombocytopenic cc purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), cc Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ cronsplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of disease involving abnormal cell consolidate and including arterioscia and versular restraction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynuclectide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders o conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                     proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxi shock syndrome or allosensitisation due to blood transfusions, and treatment of allergy, asthma and hypersensitivity reactions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Welcher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (AMGE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               endocrinopathy; lymphoproliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-130881/17
)B; AAU75542.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Fig 3; 135pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
(e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
80.1240
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/product= "B7-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B7-like protein, B7-L_h3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,
MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B7-L_h3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      useful
                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        are
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
DЬ
                            Qy
                                                             Вþ
                                                                                         Qy
                                                                                                                           밁
                                                                                                                                                       δÃ
                                                                                                                                                                                          B
                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                   γQ
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                δ
V
                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                             ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88888×8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Si
Matches 1124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (extrinsic alveolitis), vasculopathies, coeliac disease, and thrombocytopenias, Guillain-Barre syndrome and myasthenia griymphoproliferative disorders such as multiple myeloma. The sequence represents the coding sequence of human B7-L_h3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pemphigoid), endocrinopathies (Grave's disease), various pneumopathies
                                                                                                                                                          771
                                                                                                                                                                                                                                                                                                                                                                                  596
                                                                                                                                                                                                                                                                                                                                                                                                                                               536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         416
                                                                                                                                                                                                                                                                                                                                                   591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51
                                                             GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCCGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTT3TAGTC 410
TGTTGTGGCTGCAACTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTT
                                                                                                                           ACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCCGCCGCCGTCGT
                                                                                                                                                          ACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGT
                                                                                                                                                                                                                       TTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGC 770
                                                                                                                                                                                                                                                       GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT
                                                                                                                                                                                                                                                                                                                    ACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACT 715
                                                                                                                                                                                                                                                                                                                                                   ACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACT
                                                                                                                                                                                                                                                                                                                                                                                 AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                   AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG 590
                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCC;;GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGC 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1240 BP; 318 A; 319 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 1123.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      305 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4e-301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      298 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anaemia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gravis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                    710
                                                                                                                                                                                                                                                                                                                                                   650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415
                                                              955
                                                                                                                                                                                                                                                                                                                                                                                                                                               595
 1015
                                                                                                                                                                                                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355
```

Š

AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCT 1010

```
QΥ
                                                                                                                                      밁
                                                                                                                                                                                  ş
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                               Š
Š
                                              Вb
                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allery, asthma and hypersensitivity reactions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polynucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            miscarriage, precent record of the proteins comprising proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are marked for enhancing the immune response to tumours. (I) plays a role
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune an proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful for enhancing the immune response to tumours. (I) plays a growth and maintenance of cancer cells based on the observation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000; 2000US-214512P.
28-NOV-2000; 2000US-0729264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_hl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1175
                                              121
  181
                                                                                            121
                                                                                                                                                                                                                                                                                                                                  Local Sin
hes 1175;
                                                                                                                                        61
                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-130881/17.
                                                                                                                                                                                                                                                                                   CTGTCTGCCCATCTGAATAACAAGAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGT 60
                                                                              GCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGG
                                                                                                                                        CTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCAGGCTC
                                                                                                                                                                                                                                       CTGTCTGCCCATCTGAATAACAAGAGATGGGGCTTGTGATTTTCCTCCACGGTTCTGGGT 60
    TGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGA
                                              GCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGACATGG
                                                                                                                                                                                       CTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCCAGGCTC 120
                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                                            295 A; 307 C;
                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,
MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ,
                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                        Score 1175; !
                                                                                                                                                                                                                                                                                                                                  Pred. No. 0;
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                               286 G; 287 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chute
                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                24;
                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                              Length 1175
                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                           120
                                                                                            180
                                                                                                                                                                                                                                                                                                                                    0;
```

ABK13030;

ABK13030 standard;

CDNA; 1240 BP

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                     8
                                                                                                                                                 δÃ
                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                           덩
                                                                                                                                                                                                                                                                      ΩV
                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                       Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                          20
                                                                                                                      밁
                                                                                                                                                                                 Db
 1141
                                                                                                                      1021
                                                            1081
                                                                                          1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                 961
                                                                                                                                                                                                            961
                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                           781
                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTCTCAGA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTGCGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCCACCACAATGTGGAGCCCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCCCAGTG
                                                                              GGGCTGATCAACGTCCACCCAGGCCAGCCAGGCAGTCCACAGGCTTCTTTAATCTGGCCA
                                                                                                                                                                                                             AAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCTCCCCCA
                                                                                                                                                                                                                                                                                                                    GCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGATTTCGTA(TCAAT
                                                                                                                                                                                                                                                                                                                                                                             TGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                       TAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCATGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGATTCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGATATTTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTACCTTA
GTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                           GGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTTAATCTGGCCA
                                                                                                                      AATCCTGTGAATCCAGTGATCCTGAACAAAGAACAGTAGCTGTGGCCCTCCTCACCAGC
                                                                                                                                                                                                                                                                       TTCAAAAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATG
                                                                                                                                                                                                                                                                                                     GCAACTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTAITCAAT
                                                                                                                                                                                                                                                                                                                                                             TGACGCCGACGTGTACTTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCT
                                                                                                                                                                                 TTCAAAAGAAATCTGAAAAAGAGAAGACAAAACAAAGAAACTGAGACAGAAAGTGGAAATG
                                                                                                                                                       1080
                                                                                                                                                                                    1020
                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                  840
                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                       780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
```

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB seq
                                                    N_Geneseq_101002:*

1: /SIDS2/gcgdata/g
2: /SIDS2/gcgdata/g
3: /SIDS2/gcgdata/g
4: /SIDS2/gcgdata/g
5: /SIDS2/gcgdata/g
6: /SIDS2/gcgdata/g
6: /SIDS2/gcgdata/g
7: /SIDS2/gcgdata/g
8: /SIDS2/gcgdata/g
9: /SIDS2/gcgdata/g
9: /SIDS2/gcgdata/g
10: /SIDS2/gcgdata/g
11: /SIDS2/gcgdata/g
11: /SIDS2/gcgdata/g
11: /SIDS2/gcgdata/
12: /SIDS2/gcgdata/
13: /SIDS2/gcgdata/
14: /SIDS2/gcgdata/
15: /SIDS2/gcgdata/
16: /SIDS2/gcgdata/
17: /SIDS2/gcgdata/
18: /SIDS2/gcgdata/
19: /SIDS2/gcgdata/
20: /SIDS2/gcgdata/
21: /SIDS2/gcgdata/
22: /SIDS2/gcgdata/
23: /SIDS2/gcgdata/
23: /SIDS2/gcgdata/
24: /SIDS2/gcgdata/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-729-264-1
1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       April 28, 2003, 23:25:03; Search time 284.322 Seconds
                                           /SIDS2/gogdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA1999.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA2000.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA2001.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA2001.DAT:*
/SIDS2/gogdata/geneseq/geneseqn-emb1/NA2001.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ctgtctgcccatctgaataa.....gtaatacaactgtagtatag 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1990.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1991.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1993.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (without alignments)
9306.701 Million cell updates/sec
```

score d. No. is the number of results predicted by chance to have a re greater than or equal to the score of the result being printed, is derived by analysis of the total score distribution.

SUMMARIES

9	80	7	6	υ	4	ω	2	Ľ	Result No.
186	186	190.4	381	779.2	1067.4	1122.4	1123.4	1175	Score
15.8	15.8	16.2	32.4	66.3	90.8	95.5	95.6		Query Match Length DB
895	754	401	1195	1392	1139	1168	1240		Length I
24	24	22	24	23	24	24	24	24	í
ABK13033	ABK13034	AAI36582	ABK13032	AAS92356	ABK13031	ABK13029	ABK13030	ABK13028	ID
DNA encoding mouse	DNA encoding mouse	Probe #5268 used t	DNA encoding mouse	DNA encoding novel	DNA encoding human	DNA encoding human	DNA encoding human	DNA encoding human	Description

c 45	C 44				40			c 37				33	32			c 29				25				c 21		19		c 11		1.5		c 13		11	c 10	
44.8	44.	44.	44.	4	4	4	4	4	4	4	45.	45.	45.	45.	45.	45.	45.	45.	45.	46.	46.	46.	47.	47.4	47.	47.	48.	48.	48.	49.	51.	51.	51.	52.	53.	
		•	•	•																				4.0							4	_				
3263	2614	1310	254	6541	5975	3624	3210	2260	2115	462	5397	5447	5215	3135	3042	3884	1509	8821	2682	4044	1983	2333	22341	3894	2733	381	4180	3217	3217	46954	403	397	389	7029	277	
20	24	20	21	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	23	23	20	23	10	12	10	23	21	20	21	23	21	
AAV08560	ABK36100	AAV08558	AAZ45758	ABL04172	ABL08976	ABL03190	ABL08977	ABL03191	ABL26940	ABL26941	ABL29757	ABL25652	ABL28444	ABL25653	ABL28445	ABL24570	ABL24571	ABL16096	ABL16097	ABL24482	ABL24483	AAF75339	ABL03352	ABL03353	AAX84442	ABV54466	AAN91773	AAQ12002	AAN91578	ABL16830	ABK10240	AAX89891	024	ABL29756	ABK10239	
	ence #49	Transgene for epit	0	la							La						la				hila	~		မွ	-	an prostate ex	ndrogen re	l-length rat a	Rat androgen recep	_	Trinucleotide repe	מ	Tri-nucleotide rep	lano	Trinucleotide repe	

ALIGNMENTS

RESULT 1 ABK13028 ABK13028 standard; cDNA; 1175

ВP

ABK13028;

23-APR-2002

(first entry)

DNA encoding human B7-like protein, B7-L_h1.

Human; B7-like protein; B7-L; antiinfertility; gynaecological; antiinfumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; genecondocrinopathy; lymphoproliferative disorder; gene; ss.

Homo sapiens.

28-JUN-2001; 2001WO-US20719 Key 03-JAN-2002. WO200200710-A2 Location/Qualifiers 27..1175 /product= "B7-like protein, B7-L_h1" /*tag=

•		
•		
•		
	•	

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/185,432

FILING DATE: 21-JAN-1994 CLASSIFICATION: 530

```
; NAME/KEY: misc_feature
; OTHER INFORMATION: Plasmid pGRO403R
US-08-479-913E-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-08-479-913E-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; NAME/KEY:
; LOCATION:
US-08-185-432-1
 Query Match 3.5%;
Best Local Similarity 75.0%;
Matches 51; Conservative
                                                                                                                                                        NUMBER OF SEQ ID NOS: 6
SOFTWARE: MicroSoft Word 97
SEQ ID NO 1
LENGTH: 6177
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/08479913E Patent No. 6416998 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 3.5%;
Best Local Similarity 66.3%;
Matches 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (212) 869-9864/974
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5063 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: unknown
                                                                                                                                                                                                                                   APPLICANT: Ledebur, Harry C.
APPLICANT: Kittle, Joseph D.
TITLE OF INVENTION: MODIFIED STEROID HORMONES FOR GENE THERAPY AND METHODS FOR THEIR
FILE REFERENCE: 212/133
CURRENT APPLICATION NUMBER: US/08/479,913E
CURRENT FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: US 07/939,246
PRIOR FILING DATE: 1992-09-02
                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: O'Malley, Bert W. APPLICANT: Tsai, Ming-Jer
                                                                                                                        ORGANISM: Artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2928 GCTGTTGCTGTCGCGGATGCAGTGGTAAT 2900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 73:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      868 GCTGTAGAAGAAAAAGAGGATTTCGTATT 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
864..1349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
3439..3736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
1944..3370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cDNA/DNA (genomic)
 Score 40.8; DB 4;
Pred. No. 0.14;
0; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 41; DB 1; Length 5063; Pred. No. 0.11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7326-006
 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30; Indels
                                Length 6177;
 Indels
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

Search completed: April 29, 2003, 10:49:16 Job time: 88.1906 secs

RESULT 12 US-08-185-432-3/c

```
В
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                     οy
                                                                                                                                                                      US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-185-432-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08185432 Patent No. 5750652
                                                                                                                            Sequence 23, Application US/08185432 Patent No. 5750652
                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (212) 869-8864/9
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 3:
                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM CC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 733
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEPHONE: (212) 790-9090
                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                             1815 GCTGTTGCTGTCGCGGATGCAGTGGTAAT 1787
                                                                                                                                                                                                                                                                                                                   1875 GCTGCTGCTGCTGCTGCTGCTGCTGCAGCTGTTGCTGCTGCTGTTGCTGCTTGTTGCTGCT 1816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 3771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
 APPLICANT: Matsuno, TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: cDNA
                                        APPLICANT:
                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                           808 GCTGCTGCTGCCGCCGTCGTTGTTGTGTGCTGCAACTGCTGCTGCTGCTTGTTTCT 867
                                                                                                                                                                                                                                                                                868 GCTGTAGAAGAAAAAGAGGATTTCGTATT 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: New York
STATE: New York
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/185,432 FILING DATE: 21-JAN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity es 59; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Busseau,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (212) 869-8864/9741
                                                     Artavanis-Tsakonas, Spyridon
Busseau, Isabelle
Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Artavanis-Tsakonas, Spyridon
                                      Xu, Tian
                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
345..2558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DELÍEX PROTEINS, NUCLEIC ACIDS, ANTIBODIES, AND RELATED METHODS
                                                                                                                                                                                                                                                                                                                                                                                                         3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isabelle
Kenji
DELTEX PROTEINS, NUCLEIC ACIDS, AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7326-006
                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                         Score 41; DB 1; Length 3771; Pred. No. 0.096;
                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                           0
```

```
RESULT 14
US-08-185-432-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: cDNA US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/08185432 Patent No. 5750652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 3.5%;
Best Local Similarity 66.3%;
Matches 59; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (212) 869-886
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS NUMBER OF SEQUENCES: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1957 GCTGTTGCTGTCGCGGATGCAGTGGTAAT 1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1897 GCTGCTGCTGCCTGTTGCTGCTGTTGCATCTGCAGCTGTTGCTGCTGTTGTTGCTGCT 1956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 73: TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LEM PC compatible
COMPUTER: EM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      868 GCTGTAGAAGAAAAAGAGGATTTCGTATT 896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 808 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: doubt TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 21-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                             STATE: New York COUNTRY: U.S.A. ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (212) 790-9090
TELEFAX: (212) 869-8864/9741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                        CITY: New York
                                                                                                                                                                           ADDRESSEE:
STREET: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER:
  SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic acid
)EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3771 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1155 Avenue of the Americas
                                                                                                                                                                             E: PENNIE & EDMONDS
1155 Avenue of the Americas
                                                                                                                                                                                                                                                  Matsuno, Kenji
IVENTION: DELTEX PROTEINS, NUCLEIC ACIDS, AND
IVENTION: ANTIBODIES, AND RELATED METHODS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U.S.A.
                                                                                                                                                                                                                                                                                                                                  Diederich, Robert J.
                                                                                                                                                                                                                                                                                                                                                        Busseau, Isabelle
                                                                                                                                                                                                                                                                                                                                                                        Artavanis-Tsakonas, Spyridon
PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PENNIE & EDMONDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JAN-1994
                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/185,432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7326-006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 41; DB 1; Length 3771; Pred. No. 0.096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                            COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

0;

Matches

Best Local Similarity Matches 50; Conserv

Conservative

0;

78.1%;

Pred. No. 0.014;

Mismatches

14;

Indels

0; Gaps

0;

```
; TYPE: DNA
; ORGANISM: p-2093 plasmid
US-09-043-303-7
                                                                                                                                                                                                                                                                                                                                        US-09-043-303-7/c

; Sequence 7, Application US/09043303

; Patent No. 6251589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA; ORGANISM: Homo sapiens US-09-043-303-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-043-303-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT-US92-11107-12
   Query Match
                                                                                                       SEQ ID NO
                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12, Application US/09043303 Patent No. 6251589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                     APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and
TITLE OF INVENTION: Primers Therefor
FILE REFERENCE: 0760-0241p
CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1998-05-18
EARLIER APPLICATION NUMBER: PCT/JP96/01999
EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/043,303
CURRENT FILING DATE: 1998-05-18
EARLIER APPLICATION NUMBER: PCT/JP96/01999
EARLIER FILING DATE: 1996-07-18
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                        SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Method for Diagnosing Spinocerebellar Alaxia Type 2 and TITLE OF INVENTION: Primers Therefor FILE REFERENCE: 0760-0241P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: TSUJI, Shoji
APPLICANT: SANPEI, Kazujiro
                                                                                       LENGTH: 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               868 GCTG 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       758 TGCTGCTGCTGCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        864 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 GCTG 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      similarity 78.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.6%;
 3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 41.6; DB 4; Length / Pred. No. 0.0085; O; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
Score 41.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 42.6; DB 5; Length 3292; Pred. No. 0.031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
DΒ
4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
δÃ
                                                                  Вb
                                                                                                                                                                                                  US-08-145-617-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
US-08-145-617-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                Matches
                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIJIM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/681,494
FILING DATE: 10-JUN-1991
APPLICATION NUMBER: DE P3834636.2
                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 703-241-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 11-OCT-1988
ATTORNEY/AGENT INFORMATION:
                                 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: PROCESS FOR ANALYZING LENGTH TITLE OF INVENTION: POLYMORPHISMS IN DNA REGIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Jackle, Herbert APPLICANT: Tautz, Diethard
154 TECTECTECTEATETTECTECTETTE 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                               786 CCGACGTGTACTATACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAAC 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 301 N. Washington S CITY: Falls Church STATE: Virgin'-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        868 GCTG 871
                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 703-2--
TELEPHONE: 703-241-2848
                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 30, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7 GGTG 4
                               TGCTGCTGCCGTTGTTGTTTCTGCTG 871
                                                              CCGAACTCCAGGCCTCCGAGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGT 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22046
                                                                                                                                                                                                                                                                  nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                    Svensson, Leonard R.
                                                                                                                                                                                                                                                                                                                                    24834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08145617
                                                                                                                                                                                                                                                                                379 base pairs
                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   United States of America
                                                                                                                                                                                                                                       linea
                                                                                                                                                                                                                  DNA (genomic)
                                                                                                                                                                                                                                                   single
                                                                                                                                                3.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/145,617
                                                                                                                                                                                                                                                                                                                                                                                                                 30,330
                                                                                                                                0;
                                                                                                                              Score 41.2; DB 1;
Pred. No. 0.025;
0; Mismatches 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KOLASCH & BIRCH
                                                                                                                                                            Length 379;
                                                                                                                                Indels
```

0;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-328-809-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-258-442-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 63; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Lippar
                                                                                                                   TELEFAX: 617-248-7100
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 3292 base pair
                                                                                                                                                                            REFERENCE/DOCKET NUMBER: MIT-023 (5473/24)
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                         MOLECULE TYPE: |
ORIGINAL SOURCE:
                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Fenton, Gillian M.
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Uses For DNA Structus
TITLE OF INVENTION: Recognition Proteins
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
ORIGINAL SOURCE:
               IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         758 TGCTGCTGTTGCTGCAACTGCTGTTGTTGTTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              864 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  818 AGATGATGATGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 617-248-7100
                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CLONE:
                            ORGANISM:
                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Application US/08328809 5705334
                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                             MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lambda yPt
lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Essigmann, John M.
Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
Pil, Pieter M.
                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       53 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kellett, Patti
VENTION: Uses For DNA Structure-Specific
                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Brown, Steven
                         Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1..1626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lippard, Stephen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent Administrator, Testa, Hurwitz & Thibeault
                                                       DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA (genomic)
                                                                                       double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.6%;
                                                                                                                                                                                                                                                                                                      US/08/328,809
                                                                                                                                                                                                                          36,508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42.6; DB 1;
Pred. No. 0.031;
0; Mismatches 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
```

```
Query Match
Best Local Similarity
"~+~hes 63; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US92-11107-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-328-809-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12, Application PC/TUS9211107 GENERAL INFORMATION:
                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                 FEATURE:
                                                                                              MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 3292 base pairs
                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0.
FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 02173
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Essigmann, John M.
APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              758 TGCTGCTGCTGCCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             864 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               818 AGATGATGTTGTTGTTGAAGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            804 ATACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGT 863
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC
OPERATING SYSTEM:
                                                    CLONE:
                                                                                  ORGANISM:
                                                                                                                                   TOPOLOGY:
                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                 TYPE: NUCLEIC ACID
                                                                                                                                                                                                                                   TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: PFILING DATE: 19921218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: 2 Milit:
CITY: Lexington
                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                      NAME: Granahan, Patricia REGISTRATION NUMBER: 32,
                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥
                                               lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 Militia Drive
                                                                                                                                                                                                                                       617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pil, Pieter M.
                                                                                Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                        US 07/539,906
                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT/US92/11107
                                                                                                                                                                                                                                                                                                  32,227
                                                                                                                                                                                                                                                                                      MIT-4787AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 42.6; DB Pred. No. 0.031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 3292;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
RESULT 5
US-07-814-964-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-041-886-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12, Application US/07814964 Patent No. 5359047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 1776 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
           TELEFAX: 617-861-9540
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                      ZIP: 02173
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Recognition
TITLE OF INVENTION: Protein and Uses Therefor
NUMBER OF SEQUENCES: 13
                                                          REFERENCE/DOCKET NUMBER: MIT-4787AAA TELECOMMUNICATION INFORMATION: 617-861-6240
                                                                                                                                                                                APPLICATION NUMBER: US
FILING DATE: 19911226
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                        FILING DATE: 18-JUN-1990
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,7
                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    915 GCTGCTGTTTTTCAAAGTAGGCTTCTCGTCTCTTCCGAAGCTCTTCTGAA 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         868 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAA 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                    STREET: 2 Milit:
CITY: Lexington
STATE: MA
                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68;
                                                                                                                                                                                                                                                                                                                                          02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3.6%;
Similarity 61.8%;
                                                                                                                                                                                                                                                                                                                                                                                                  E: Hamilton, Brook, Smith & Reynolds, P.C 2 Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (619)
                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Toney, Jeffrey
Bruhn, Suzanne
3292 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Essigmann, John M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brown, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
36..1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Donahue, Brian A.
                                                                                                                                                                                                                                                                            E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (619) 535-9001
519) 535-8949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pieter M.
                                                                                                                                                                      us 07/539,906
                                                                                                                                                                                                                                 US/07/814,964
                                                                                                       32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 42.8; DB Pred. No. 0.02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-07-814-964-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-258-442-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Lippard, Stephen J.
TITLE OF INVENTION: DNA Structure Specific Re-
TITLE OF INVENTION: Protein and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 617-861-6240
                                                                                                                                                                                  FILING DATE: 18-JUN-1990 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          864 TTCTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAAT 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          818 AGATGATGATGTTGTTGTAAGTTGTTGTTGTTGTTGCAACTGGTGTTGCTGTTGTAGC 759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          804 ATACGCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTGTTGT 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          758 TGCTGCTGCTGCCAACTGCTGTTGTTGTAATT 722
                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: Lexington
                                                                                                                                                  NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,2
                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: double
 STRANDEDNESS:
                   TYPE:
                                                                                                                                      REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLONE: lambda yPt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63;
                                                                                                                                                                                                                                                                                                                                                                                                              02173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2, Application US/08258442 5670621
               nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Donahue, Brian A.
Toney, Jeffrey H.
Bruhn, Suzanne L.
Pil, Pieter M.
                                 3292 base pairs
                                                                                    617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Essigmann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kellett, Patti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hamilton,
double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA Structure Specific Recognition
                                                                                                                                                                                                                         US 07/539,906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  John M.
                                                                                                                                                                                                                                                                                            US/08/258,442
                                                                                                                                                      32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Brook, Smith & Reynolds, P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                        MIT-4787AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42.6; DB 1; Length 3292; Pred. No. 0.031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                  US-08-531-927B-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-531-927B-3
                                                                                                                   APPLICANT: Kakizuka, Akira
TITLE OF INVENTION: DNA Sequence Encoding the Mac
Patent No. 5840491
TITLE OF INVENTION: Disease Gene and Uses Thereof
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                               Sequence 1, Application US/08531927B Patent No. 5840491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP H6-
FILING DATE: 21-SEP-1994
ATTORNEY/AGENT INFORMATION:
NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 617-861-9540
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION WITH-
COMPUTER READABLE FORM:
                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 617-861-6240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                   911 ATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAGAAAGTGGAAATGAAA 963
                                                                                                                                                                                                                                                                                                                                                                                                                       150 TGCTGYTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACA 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                          852 TGCCGTTGTTTCTGCTGTAGAA-GAAAAGAGGATTTCGTATTCAAATTTCAAAAGAA 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            792 TGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGC 851
                                              STREET: Two Militia | CITY: Lexington STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                    90 AAACTTAAAAGAATAAATACACCATGAGAAAAACTATTCATAAGGAAAATACA 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/531,927B FILING DATE: 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                    02173-4799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Massachusetts
                                                                                     Two Militia Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      325 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Two Militia Drive
                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible
                                                                                                    Hamilton, Brook, Smith & Reynolds, P.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.1%;
                                                                                                                                                                                          DNA Sequence Encoding the Machado-Joseph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP H6-251600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
:-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATH95-01A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 48.2; DB 2;
Pred. No. 0.00023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

```
Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
US-09-041-886-12/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION: US-08-531-927B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12, Application US/09041886 Patent No. 6235872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 68; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Bredesen, Dale E.
APPLICANT: Rabizadeh, Sharro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 617-861-9540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Campbell & Flores LLP
STREET: 4370 La Jolla Village Drive, Suite 700
                                   ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,81
                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 1776 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 21-SEP-1994
ATTORNEY/AGENT INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     868 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAA 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              808 GCTGCTGCTGCCGCCGCCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                915 GCTGCTGTTTTCAAAGTAGGCTTCTCGTCTCTCCGAAGCTCTTCTGAA 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE
                                                                                                                                                                                                                                                                                                            STREET: 4370 La
CITY: San Diego
                   REFERENCE/DOCKET NUMBER:
                                                                                         CLASSIFICATION:
                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                             ZIP: 92122
                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                  STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: ATH95-01A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 617-861-6240
TELEFAX: 617-861-9540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 21 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Granahan, Patricia
                                                                                                                                                                                                                                                                                                  California
                                                                                                                                                                                                                                                                             United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36..1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JMBER: JP H6-251600
21-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.6%;
                                                                                                                                                                                                                                                                                                                                                                                          Proapoptotic Peptides, Dependence Polypeptides and Methods of Use 72
                                                                                                                              US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/531,927B
                 31,815
ER: P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 42.8; DB Pred. No. 0.02; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2; Length 1776;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
      0 0 0 0 0 0 0 0
                                                                                                                                                                        000
                                                                                                                                                                                                                                   000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
    4440.4
440.4
440.4
440.4
400.4
400.4
400.4
                                                                                                                                                                                                                                                 51.8
42.8
42.8
42.6
42.6
42.6
41.6
41.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued_Patents_NA:*

1: /cgn2_6/ptodata/1.

2: /cgn2_6/ptodata/1.

3: /cgn2_6/ptodata/1.

4: /cgn2_6/ptodata/1.

5: /cgn2_6/ptodata/1.

6: /cgn2_6/ptodata/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      April 28, 2003, 23:25:03; Search time 49.1906 Seconds (without alignments) 7325.486 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                441362 seqs, 153338381 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-729-264-1
1175
                                                                                                                                                                                                                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ctgtctgcccatctgaataa.....gtaatacaactgtagtatag 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
      /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
/cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                               5063
6177
7257
484
2674
10348
10348
10348
10348
10366
                                                                                                                                                                                                                     203
379
3771
3771
                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                   042844444
US-09-253-691-3
US-08-531-927B-3
US-08-531-927B-1
US-09-041-886-12
US-09-041-886-12
US-09-043-809-7
PCT-US92-111.07-12
US-09-043-303-7
US-09-043-303-7
US-08-185-432-3
US-08-185-432-3
US-08-185-432-3
US-08-185-432-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-011-180-1
US-09-041-303-10
US-08-453-265-5
US-08-463-802B-6
                                                                                                                                                                                                                                                                                                                                                                                                                                     ID
                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                        Patent No.
                                                              Sequence
Sequence
Sequence
Sequence
               Sequence
Sequence
Sequence
                                                                                                                          Sequence
Sequence
                                                                                                                                                                                                                                                                                                              Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
                                                                                                                                                                        Sequence
                                                                                                                                                                                       Sequence
                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
    Sequence
                               3, Appli
17, Appli
18, Appli
18, Appli
19, Appli
10, Appli
11, App
    ο ο
   Appli
Appli
```

GENERAL INFORMATION:
APPLICANT: Kakizuka, Akira
TITLE OF INVENTION: DNA Sequ
Patent NO. 5840491
PITLE OF INVENTION: Disease
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:

ADDRESSEE:

Hamilton, Brook, Smith & Reynolds, P.C

Disease Gene and Uses Thereof : 23

DNA Sequence Encoding the Machado-Joseph

RESULT 2 US-08-531-927B-3/c

Sequence 3, Application US/08531927B Patent No. 5840491

				C		
Оу Дъ	Оу ДЪ	Qy Db	Z W O	ਸ਼ੌਲੇ ਲਾਲ ਵਾਲ		000000000000000000
928 80	868 140	808 200	Query M Best Lo Matches	ULT 1 09-25 equen atenta ENERA APPLI TITLE TITLE CURRE CURRE EARLI EARLI EARLI EARLI EARLI EARLI TYPE ORGA		2000 2000 2000 2000 2000 2000 2000 200
CAAACAF AACTTAF	GCTGTAGAAGAAAAAGAGGATTTCGT 	GCTGCTGCT	Match Local Simi es 89;	000.000 AAAZHO 0		444444444444444444444444444444444444444
IAGAAAC IAAGAAI	AAGAA! CTGCTJ	CTGCTGC	Similarity 9; Conser	icat: iou: Kyu iou: IOU: IOU: IOU: IOU: IOU: IOU: IOU: IOU		
TGAGAC CAAATAC	AAGAGO	CTGCTG	4. larity 58. Conservative	n U iag in 36 199 199 6.		1168 1168 1171 1171 1171 1195 1195 1234 1234 1477 1506 1506 1506 1506 1506 1506 1506 1506
ACC	AT	CTC	9 49	/0925 ostic Trin R: US R: US R: CR R: CR R: KR R: W		1214214442121214
CAAACAAAGAAACTGAGACAGAAAAGTGGAAA 958 	ATTCAATTTC AAACATTCAA	GCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCGTTGTTGTTTCT 	Score 51.8; DB 3; pred. No. 2.4e-05; 0; Mismatches 62;	Method and Kit for ucleotide Repeats Se /09/253,691 2 98-6,278	ALIGNMENTS	US-09-043-303-17 US-08-469-802B-4 US-08-267-803B-5 US-08-267-803B-5 US-08-267-803B-2 US-08-267-803B-3 US-08-267-803B-3 US-08-267-803B-3 US-08-267-803B-3 US-08-267-803B-3 US-09-146-054-8 US-09-135-994-1 US-08-267-803B-7 US-08-267-803B-7 US-08-267-803B-7 US-08-267-803B-1 US-08-267-803B-1 US-08-267-803B-1 US-08-267-803B-1 US-08-267-803B-1 US-08-267-803B-1
	AAAAGAAATCTGAAAAAGNGAAGA 927 AAGTGAAGTATATTTAAAAAACAA 81	TGCCGTTGTTGTTCT 867 TGCTGCTGCTGCT 141	Length 397; Indels 0; Gaps	r Neuropsychiatric Disease Sequence		Sequence 17, Appli Sequence 4, Appli Sequence 5, Appli Sequence 5, Appli Sequence 2, Appli Sequence 2, Appli Sequence 3, Appli Sequence 3, Appli Sequence 6, Appli Sequence 7, Appli Sequence 1, Appli Sequence 29, Appli

0;

•		·			·	
•						
			•			
		•				
				·		
		:				

```
RESULT 15

US-09-416-384A-6/c

Sequence 6, Application US/09416384A

Patent No. US20020081584A1

PATENT NO. US20020081584A1

PATENT NO. US20020081584A1

APPLICANT: BLUMENFELD, Marta
APPLICANT: BUUGUELERET, Lydie
APPLICANT: COHEN, Daniel
APPLICANT: COHEN, Daniel
APPLICANT: CSIOUX, Laurent

TITLE OF INVENTION: Genes, proteins and biallelic markers related to central.

PILE REFERENCE: GENSET.045AUS

CURRENT FILING DATE: 1999-10-12

CURRENT APPLICATION NUMBER: US/09/416,384A

PRIOR APPLICATION NUMBER: 00/106,457

PRIOR APPLICATION NUMBER: 60/103,955

PRIOR APPLICATION NUMBER: 60/103,955

PRIOR PPLICATION NUMBER: 60/103,955

PRIOR FILING DATE: 1999-05-03

NUMBER OF SED ID NOS: 71

SOFTWARE: PATENT.P91

TYPE: DNA

ORGANISM: mus musculus

US-09-416-384A-6
Search completed: April 28, 2003, 20:36:16 Job time: 2140.37 secs
                                                                                                                   QΥ
                                                                               밁
                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 29; OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 33; OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = US-09-864-761-2182
                                                                                                                                                                                                                                Query Match 3.7%; Score 43.2; DB 10; Length 1791; Best Local Similarity 75.0%; Pred. No. 0.017; Matches 54; Conservative 0; Mismatches 18; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 3.7%;
Best Local Similarity 79.7%;
Matches 51; Conservative
                                                                         867 TGCTGTAGAAGA 878
||||||| ||
276 TGCTGTTGGTGA 265
                                                                                                                                                   329 GCTG 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            868 GCTG 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 43.2; DB 10; Length 459;
Pred. No. 0.0067;
0; Mismatches 13; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
Š
                                                                                                                                                                                                                          OTHER INFORMATION: EXPRESSED IN BY474, SIGNAL = 47
OTHER INFORMATION: EXPRESSED IN BLACENTA, SIGNAL = 53
OTHER INFORMATION: EXPRESSED IN HEL100, SIGNAL = 69
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 27
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 16
OTHER INFORMATION: EXPRESSED IN BLACK, SIGNAL = 21
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 21
OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 29
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 21
OTHER INFORMATION: STARESSED IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 18923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR FILING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: US 60/207,456
PRIOR FILING DATE: 2000-05-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/864,761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/632,366 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Penn, Sharron G. APPLICANT: Rank, David R.
                                                                   Matches
                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: GB 24263.6 PRIOR FILING DATE: 2000-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Annomax
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/608,408
PRIOR FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: PCT/US01/00666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: MAP TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH: 293
808 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 60/236,359 FILING DATE: 2000-09-27
                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/US01/00661 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 09/774,203 FILING DATE: 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/US01/00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 60/234,687
                                                                       51;
                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hanzel,
                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   David R.
el, David K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Listing Engine vers. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2001-05-
                                                                                                           3.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US01/00669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT/US01/00665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC009954.1
                                                                              0;
                                                                                                    Score 43.2; DB Pred. No. 0.005;
                                                                                  Mismatches
                                                                                                                                               DB 10;
                                                                                  13;
                                                                                                                                               Length 293;
                                                                                  Indels
                                                                                                                                                                                                                                                      1.00e-58
                                                                                     0,
                                                                                     Gaps
                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FOR
```

```
RESULT 14
US-09-864-761-2182/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2182, Application US/09864761 Patent No. US20020048763A1
                                                                                                                                                                                                                          SEQ ID NO 2182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Penn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2000-08-03
PRIOR APPLICATION NUMBER: GB 24263.6
PRIOR FILING DATE: 2000-10-04
PRIOR APPLICATION NUMBER: US 60/236,359
PRIOR FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: PCT/US01/00666
PRIOR FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US 60/180,312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: US 60/207,456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: Aeomica-X-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: US 09/632,366 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 2000-05-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                          SOFTWARE: Annomax Sequence Listing Engine vers.
                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 49117
                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                               OTHER INFORMATION: MAP TO AC009954.1
OTHER INFORMATION: EXPRESSED IN BT477.
OTHER INFORMATION: EXPRESSED IN PLACE
OTHER INFORMATION: EXPRESSED IN HBL10
OTHER INFORMATION: EXPRESSED IN HEART
OTHER INFORMATION: EXPRESSED IN FETAL
OTHER
OTHER
                                                                                                                                                ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               184
                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124 GCTG 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         868 GCTG 871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: PCT/US01/00669
FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00665
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00668
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2001-01-30
APPLICATION NUMBER: PCT/US01/00664
FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US01/00667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: PCT/US01/00663 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US C
FILING DATE: 2000-06-30
                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: PCT/US01/00670 FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: PCT/US01/00662
                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 09/774,203
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 60/234,687 FILING DATE: 2000-09-21
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT FILING DATE: 2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
INFORMATION: INFORMATION:
                                                                                                                                                                                                            459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chen, Wensheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sharron G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 David R.
l, David K.
   N: EXPRESSED IN BT474, SIGNAL = 47

N: EXPRESSED IN PLACENTA, SIGNAL = 53

N: EXPRESSED IN HEALTO, SIGNAL = 69

N: EXPRESSED IN HEART, SIGNAL = 27

N: EXPRESSED IN ETFAL LIVER, SIGNAL = 1

N: EXPRESSED IN HELA, SIGNAL = 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2001-01-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-02-04
                                                                                                                                                                                                                                                                                 2001-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT/US01/00661
                                                                                                                                                                                                                                                                                                                                             US 09/608,408
                                                                                                     53
                           16
21
```

```
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
PRIOR APPLICATION NUMBER: JP 00/159162
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR APPLICATION NUMBER: JP 00/280988
                                                                                                                                                                                                                                                                                                                                                                                         US-09-738-626-544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-728-444-151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-728-444-151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     Sequence 544, Application US/09738626 Publication No. US20020197605A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 1206
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 151
                                                                                                                                       TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                     APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 151, Application US/09728444 Patent No. US20020161207A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/728,444
CURRENT FILING DATE: 2000-11-30
PRIOR APPLICATION NUMBER: US 60/168,360
PRIOR FILING DATE: 1999-12-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: NO. US20020161207A1el Murine Polynucleotide Sequences TITLE OF INVENTION: and Mutant Cells and Mutant Animals Defined Thereby FILE REFERENCE: LEX-0100-USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Zambrowicz, Brian APPLICANT: Sands, Arthur T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Friedrich, Glenn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1)...(455)
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGIH: 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6115 GCTGCTGCCGCA 6104
                                                                                                                                                                                                                                                                                                                                                                                                                                                        222 TGCAAACCTANACCAGGATGTGGGA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      870 TGTAGAAGAAAAGAGGATTTCGTA 894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               868 GCTGTAGAAGAA 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCT 867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59;
                                                                                                                                                                                            HAYASHI, MIKIRO
OCHIAI, KEIKO
YOKOI, HARUHIKO
TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                             OZAKI, AKIO
                                                                                                                                                                              IKEDA,
                                                                                                                                                                                                                                                                                      ANDO, SEIKO
                                                                                                                                                                                                                                                                                                     MIZOGUCHI, HIROSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                 MASATO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 44; DB 9;
Pred. No. 0.0038;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 9; Length 455;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

```
US-09-864-761-18923/c
                                                                   Db 510748 CTGCTGCAGAAGAGAAGGACGAGTTCGACGTCGTTCTCGAA 510788
                                                                                                                                          Db 510688 ACGTAACCGCAGCTGCTCCAGTTGCAGTTGCTGCTGCAGGCGCGAGGCGGCGAAGCTG 510747
                                                                                                                                                                                                                                                                                                         US-09-738-626-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
US-09-738-626-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: DNA ; ORGANISM: Corynebacterium glutamicum US-09-738-626-544
                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 1
                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09738626 Publication No. US20020197605A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: OZAKI, AKIO
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOFTWARE: PatentIn ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER JP 00/159162 PRIOR FILING DATE: 2000-04-07 PRIOR APPLICATION NUMBER: JP 00/280988 PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn ver. 3.0 SEQ ID NO 544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR FILING DATE: 1999-12-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: NAKAGAWA, SATOSHI
                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Corynebacterium glutamicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 7059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                                                                                                                                                             LENGTH: 3309400
                                                                                                                                                                              806 ACGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTT 865
                                                                                                         866 CTGCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         158 CTGCTGCAGAAGAAGGACGAGTTCGACGTCGTTCTCGAA 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  866 CTGCTGTAGAAGAAAAAGAGGGATTTCGTATTTCAATTTTCAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  806 ACCCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCCAACTGCTGCTGCTGCTGCTTGTTTT 865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98 ACGTAACCGCAGCTGCTCCAGTTGCAGTTGCTGCTGCAGGCGCTGCAGGCGGCGAAGCTG 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                  65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65;
                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATEISHI, NAOKO
SENOH, AKIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HAYASHI, MIKIRO
OCHIAI, KEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MIZOGUCHI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IKEDA, MASATO
                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEIKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HARUHIKO
                                                                                                                                                                                                                                              3.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIROSHI
                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                          Score 43.4; DB 9; Length 3309400; Pred. No. 2.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 43.4; DB 9; Length 384; Pred. No. 0.0052; 0; Mismatches 36; Indels
                                                                                                                                                                                                                      36; Indels
                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

; Sequence 18923, Application US/09864761
; Patent No. US20020048763A1

; GENERAL INFORMATION

.

WPI; 2000-662424/64

```
RESULT 15
AAI95221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
     PT PT PT PT XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention relates to the use of a plasmid vector array containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebellar ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasmid vector arraying neuropsychiatric gene more than copy number containing trinucleotide repeats its use thereof \boldsymbol{\cdot}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 403 BP; 121 A; 108 C; 105 G; 69 T; 0 other;
                                                                                  Nucleic acids originating in gene expressed in human neuroblastoma, useful as probe or primer in diagnosing prognosis of human neuroblastoma, malignancy and susceptibility indicator or tumour marker neuroblastoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAI95221;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAI95221 standard; cDNA; 742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the CAG tri-nucleotide repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      represents a nucleotide sequence of the invention showing the
The invention relates to novel genes (AAI93926-AAI97963) expressed
                                    Claim 1; Page 977-978; 2979pp; Japanese.
                                                                                                                                                        WPI; 2001-565584/63.
                                                                                                                                                                                                                                                                           07-MAR-2000; 2000JP-0159195
                                                                                                                                                                                                                                                                                                            02-MAR-2001; 2001WO-JP01629.
                                                                                                                                                                                                                                                                                                                                                                           WO200166719-A1
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; neuroblastoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human neuroblastoma expressed polynucleotide SEQ ID NO 1296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       873 GCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTCT 932
                                                                      for anti-cancer agents
                                                                                                                                                                                                                        (HISM ) HISAMITSU
                                                                                                                                                                                                                                        (CHIB-) CHIBA PREFECTURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              933 GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 993 CAAACAAAGAAACTGAGACAGAAAGTGGAAA 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95 AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 89; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                         PHARM CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23pp; Korean.
                                                                                                                                                                                                                                                                                                                                                                                                                                              malignancy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 51.8; DB 21
Pred. No. 0.00042;
0; Mismatches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                tumour marker; N-myc; TrkA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 403;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
32333x3
밁
                                Qy
                                                                      Д
                                                                                                      δÃ
                                                                                                                                              Matches
                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                        human neuroblastoma. The nucleic acids are applicable as a probe or primer in diagnosing the prognosis of human neuroblastoma, malignancy and susceptibility indicators or tunour markers for anti-cancer agents. The gene information for diagnosing prognosis is related to factors similar
                                                                                                                                                                                                                     Sequence 742 BP; 180 A; 183 C; 152 G; 219 T; 8 other;
                                                                                                                                                                                                                                                         to that for N-myc and TrkA genes.
403 GAAATCTATTTCTCACAGTTCTGGAGGCTAGAAGT 438
                                                                        343 GTATATTAGTTTATAAGGCTCCCATAACAAAGCACCACAGACTGGGTGGCTTAAACAAAA 402
                    83 GAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGT 118
                                                                                                          23
                                                                                           GTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCATAACCTGGTGGCTTAGAACAATG 82
                                                                                                                                              1 Similarity 67; Conserv
                                                                                                                                              Conservative
                                                                                                                                                               4.0%;
                                                                                                                                                0;
                                                                                                                                              Score 49.6; DB 22;
Pred. No. 0.0024;
D; Mismatches 29;
                                                                                                                                                  Indels
                                                                                                                                                                                    Length
                                                                                                                                                  0;
                                                                                                                                                  Gaps
                                                                                                                                                    0
```

Search completed: April 29, Job time: 322.05 secs 2003, 11:05:46

0;

```
ACC XXX ACC XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
AAX89891/c
ID AAX898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
      Diagnosis of spinocerebellar ataxia type III (SCA III) syndrome using techniques which ensure highly accurate diagnosis
                                                                                                          WPI; 1999-527634/44.
                                                                                                                                                                       Jin DK;
                                                                                                                                                                                                                                                                                                                 26-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                           18-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                     02-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention relates to the use of a plasmid vector array containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion are known to be involved in a number of diseases including fragile X syndrome, spinocerebellar ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubral and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents
                                                                                                                                                                                                                           (SMSU ) SAMSUNG FINE CHEM CO LTD
                                                                                                                                                                                                                                                       (JIND/) JIN D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W09943852-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCAIII syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Spinocerebellar ataxia type III; SCAIII; reverse dot hybridisation; PCR-microplate hybridisation; PCR-MPH; trinucleotide repeat; TNR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Spinocerebellar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX89891 standard; DNA; 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 389 BP; 107 A; 92 C; 91 G; 93 T; 6 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              been represented by an n to keep nucleotide numbering correct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Note; Nucleotides which were illegible in the specification have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a tri-nucleotide repeat related sequence #5 disclosed in the scope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            873 GCTGCTGCTGCCGCCGTCGTTGTTGTGCCTGCCAACTGCTGCTGCCGTTGTTGTTTCT 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      993 CAAACAAAGAAACTGAGACAGAAAGTGGAAATGAA 1027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AANTTAAAAGAANACCTACACCATGAGNTANAAAA 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.28;
Similarity 57.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                              98KR-0006278
                                                                                                                                                                                                                                                                                                                                                                        99WO-KR00078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ataxia type III (SCAIII) gene fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag= &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "trinucleotide repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
137..355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 51.8; DB 21
Pred. No. 0.00042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

```
PD XX PF PA PA PA XX
                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SX CCCCCCCXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
           Jin DG;
                                                                                25-JUN-1998;
                                                                                                         25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                           spinocerebellar ataxia type III; DRPLA; neurops hereditary hypertrophic cardiomyopathy; Marfan dentatorubral and pallidoluysian atrophy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Trinucleotide repeat sequence #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to the diagnosis of spinocerebellar ataxia type III (SCAIII) syndrome using reverse dot hybridisation or PCR-microplate hybridisation (PCR-MPH). The method comprises attaching a portion of the SCAIII gene containing 73 copies of the trinucleotide (206) repeat unit (the present sequence) to a substrate, and hybridising with amplified testee genomic DNA containing copies of the trinucleotide units, PCR amplified with labeled primers (AAXB9889-90). The new method is useful for diagnosis of SCAIII syndrome, and for determining the severity of the disease. The present sequence represents the SCAIII gene fragment
                                  (SMSU ) SAMSUNG MEDICAL CENT
(JIND/) JIN D G.
                                                                                                                                       15-JAN-2000
                                                                                                                                                                 KR2000003004-A
                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                    repeat_unit
                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                              spinocerebellar ataxia; X-linked spinobubar atrophy.
                                                                                                                                                                                                                                                                                                                                                                                                                      Trinucleotide repeat; fragile X syndrome; ds;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK10240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK10240 standard; DNA; 403
                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 397 BP; 124 A; 104 C; 104 G; 65 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the disease. The present sequence represen containing 73 trinucleotide (TNR) repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 12-13; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 993 CAAACAAAGAAACTGAGACAGAAAGTGGAAA 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGCTGCTGCTGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCT 932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACTTAAAAGAATAAATACACCATGAGAAAA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGTAGAAGAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGA 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                98KR-0024064
                                                                                                         98KR-0024064
                                                                                                                                                                                                                                                                                           Location/Qualifiers 152..347
                                                                                                                                                                                                                                                    /rpt_type=
152..154
                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.9%;
                                                                                                                                                                                                                    "CAG type repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 51.8;
Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; DB 20;
0.00042;
                                                                                                                                                                                                                                                                                                                                                                                                       neuropsychiatric;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
```

0;

```
RESULT 11
ABL29756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρy
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and pallidoluysian atrophy (DRPLA), spinocerebellar ataxia, Marfan syndrome; X-linked spinobubar atrophy. The present sequence represents a nucleotide sequence of the invention showing the the CAG tri-nucleotide repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 277 BP; 80 A; 66 C; 62 G; 69 T; 0 bther;
                                                                        useful in developmental biology and in elucidating cell signalling cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL01616-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABL29756 standard; DNA; 7029 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pharmaceutical; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster genomic polynucleotide SEQ ID NO 40741.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABL29756;
                                         The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                                                                                                                                                       The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invent
                                                                                                                                                                                                                                                                  New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                                  WPI; 2001-656860/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila melanogaster
                            at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                     Claim 1; SEQ ID NO 40741; 21pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                   Venter JC,
                                                                                                                                                                                                                                                                                                                                                                               (PEKE ) PE CORP NY.
                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2001; 2001WO-US09231.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         993 CAAACAAAGAAACTGAGACAGAAAGTGGAAA 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           933 GCTGTAGAAAAAAAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAAGAGAGA 992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95 AACTTAAAAGAATAAATACACCATGAGAAAA 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTGTTGCTGCTTTTGCTGCTGTCTGAAACATTCAAAAGTGAAGTATATTTAAAAAAACAA 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                   Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              2000US-191637P.
2000US-0614150.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ds.
                                                                                                                                                                                                                                                                                                                                                   Ľ
                                                                                                                                                                                                                                                                                                                                                   PWD,
                                                                                                                                                                                                                                                                   detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 53.4; DB 21;
Pred. No. 0.00013;
                                                                                                                                                                                                                                                                                                                                                   Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         277;
                                                                                                                                                                            The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                             and
                                                   WIPO
                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Sequence 7029 BP; 1426 A; 1440 C; 1945 G;

2218 T; 0 other;

Disclosure; Fig 10; 23pp; Korean

```
ABK10248/c
ID ABK102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вр
11 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
misc_difference 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABK10248 standard; DNA; 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5560 GCTGTATTTGCTAAAAAGAAGTAATCATTAATTTCCGGTAAAAA 5603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5500 congrigated action of the state of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=
misc_difference 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spinocerebellar ataxia type III; DRPLA; neuropsychiatric; hereditary hypertrophic cardiomyopathy; Marfan syndrome; dentatorubral and pallidoluysian atrophy; spinocerebellar ataxia; X-linked spinobubar atrophy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Trinucleotide repeat; fragile X syndrome; ds;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tri-nucleotide repeat related sequence #5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK10248;
                                               Plasmid vector arraying neuropsychiatric containing trinucleotide repeats its use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-MAY-2002 (first entry)
                                                                                                                                                                         Jin DG;
                                                                                                                                                                                                                                                                                                                                                           25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                           15-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             KR2000003004-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       933 GCTGTAGAAGAAAAGAGGATTTCGTATTCAATTTCAAAAGAAA 976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           873 GCTGCTGCTGCCGCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTCT 932
                                                                                                                            WPI; 2000-662424/64
                                                                                                                                                                                                                            (SMSU ) SAMSUNG MEDICAL CENT
(JIND/) JIN D G.
                                                                                                                                                                                                                                                                                                        25-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                           98KR-0024064.
                                                                                                                                                                                                                                                                                                                                                             98KR-0024064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note- "Illegible in the specification" 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        b
"Illegible in the specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Illegible in the specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Illegible in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Illegible in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Illegible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 52.8; DB 23; Pred. No. 0.001; 0; Mismatches 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the specification"
                                                     gene more than copy number thereof -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 7029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
Ş
                                                                                                                          밁
                                                                                                                                                                         2
                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    constitution to the control of the serious of the polypeptide in C growth and maintenance of cancer cells based on the observation of C seminal vesicle hyperplasia in transpenic mice overexpressing B7-L cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cancer and cancers of flaematopoietic system. B7-L polypeptide testicular cancer and cancers of haematopoietic system. B7-L polypeptide cancer, lung, brain, breast, ovarian, cancer and cancers of haematopoietic system. B7-L polypeptide cancer including seminal vesicle cancer, lung, brain, breast, ovarian, can allograft transplantation, graft versus host disease, "-cell pathway can be manipulated to regulate cytotoxic T-lymphocyte response can be call dependent B-cell mediated diseases and autoimmune diseases. B7-L completed with can be useful for alloviating the symptoms associated with can disease involving chronic immune cell dysfunction or to treat can disease such as systemic lupus arythematosus, rheumatoid carbitis, multiple sclerosis, diabetes, immune thrombocytopenic carbitis, multiple sclerosis, diabetes, immune thrombocytopenic carbitantation by a systemic lupus and disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), carbitis and disease (Crohn's disease and ulcerative colitis), carbitis and disease such as a systemic lupus arythematowand organic cuseful for diseases and treatment of diseases involving abnormal cell confidence in an arrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive agents for bone marrow and organic consistence in the processive
                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (crave's disease), various pneumopathies (extrinsic alveolitis)) vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of mouse B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 895 BP; 250 A; 223 C; 212 G; 210 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The polypeptide, polynucleotide encoding it and antibody against (1) useful for treating B7-like polypeptide related disease, disorders conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and extracellular domains and other regulators of B7-L polypeptides are extracellular domains and other regulators of B7-L polypeptides are
229 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                  235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                             175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 6; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and prollferative disorders, e.g. cancer and arteriosclerosis
                                                                                                           169 CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                   115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to an isolated B7-like (B7-L) polypeptide (I) polypeptide, polynucleotide encoding it and antibody against (I)
                                                                                                                                                                                                                      AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 168
                                                                                                                                                                                                                                                                                                                                                      236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                     15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                             Pred. No. 5.8e-41;
0; Mismatches 84
                                                                                                                                                                                                                                                                                                                                                                                                   Score 185.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                             DB 24; Length 895;
                                                                                                                                                                                                                                                                                                                                             84;
                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                        294
                                                                                                              228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          are
                                                                                                                                                                                                                                                                                                                                    0;
```

```
;
dg
RESULT 10
ABK10239/c
ID ABK102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                    Disclosure; Page 12; 23pp; Korean
                                                                     Plasmid vector arraying neuropsychiatric gene more than copy number containing trinucleotide repeats its use thereof \boldsymbol{\cdot}
                                                                                                       WPI; 2000-662424/64.
                                                                                                                           Jin DG
                                                                                                                                                                          25-JUN-1998;
                                                                                                                                             (JIND/) JIN D G.
                                                                                                                                                                                             25-JUN-1998;
                                                                                                                                                                                                                 15-JAN-2000
                                                                                                                                                                                                                                    KR2000003004-A.
                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                             repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                             spinocerebellar ataxia type III; Marfan syndrome; hereditary hypertrophic cardiomyopathy; neuropsychiatric; dentatorubral and pallidoluysian atrophy; spinocerebellar ataxia; X-linked spinobubar atrophy.
                                                                                                                                                     (SMSU ) SAMSUNG MEDICAL CENT
                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Trinucleotide repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Trinucleotide repeat sequence #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABK10239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABK10239 standard; DNA; 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415 TGCTTACCTTACCGTCCAAG 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCTTCCTCTCAGTGCAAG 428
                                                                                                                                                                          98KR-0024064
                                                                                                                                                                                             98KR-0024064
                                                                                                                                                                                                                                                                                           /rpt_type=
198..200
                                                                                                                                                                                                                                                                                                                   /*tag= b
note= "CAG type repeat"
198..222
                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 152..194
                                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                     /rpt_type=
152..154
                                                                                                                                                                                                                                                                                                                /*tag=
                                                                                                                                                                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   fragile X syndrome; ds; DRPLA;
                                                                                                                                                                                                                                                                      "CAG type repeat"
                                                                                                                                                                                                                                                                                                      TANDEM
                                                                                                                                                                                                                                                                                                                                                                TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              348
```

This invention relates to the use of a plasmid vector array containing a neuropsychiatric gene containing trinucleotide repeats. Tri-nucleotide repeats and their expansion areknown to be involved in a number of diseases including fragile X syndrome, spinocerebellar ataxia type III, hereditary hypertrophic, cardiomyopathy, dentatorubra

hereditary hypertrophic, cardiomyopathy, dentatorubral

```
antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiathmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirherantiinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABK13034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK13034 standard; cDNA; 754
                                                                                             seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell adependent B-cell mediated diseases and autoimmune diseases. B7-L molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid autoimmune diseases such as systemic lupus erythematosus, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA encoding mouse B7-like protein, B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polypucleotide encoding it and antibody against (I) are useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2002
                 arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They
                                                                                                                                                                                                                                                                                                                 proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role in growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and prollferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 7; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAU75546.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AMGE-) AMGEN INC
also useful as immunosuppressive agents for bone marrow and organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 53..724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product= "B7-like protein, B7-L_m3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful
```

```
RRESULT 9
ABK13033
ID ABK13033
ID ABK13033
ID ABK13033
ID ABK1
XX BOUS
XX BOUS
XX BOUS
XX MOUS
XX MOUS
XX MOUS
XX Anti
XX Anti
XX Anti
XX Anti
XX Anti
XX CEPT
XX CDS
FT CDS
FT CDS
FT CDS
XX Y W020
XX W020
XX W020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaenia, thrombocytopenias, Guillain Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                             antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                              Mouse; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallegic;
                                                                                                                                                                                                                                                                                                                                                                                                                   DNA encoding mouse B7-like protein, B7-L_m2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2002
                                          WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK13033 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        754 BP; 220 A; 191 C; 175 G; 168 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               represents the coding sequence of mouse B7-L_m3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                          Location/Qualifiers 53..865
                                                                                   /product= "B7-like protein, B7-L_m2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 185.6; DB Pred. No. 5.3e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294
```

Š

```
В
         1060
                                                                                                                                                                                                                        1015
                                                                                                                                                                             946
                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                    844
                                                                                                                                                                                                                                                                                                                                                                                               895
                                                                                                                                                                                                                                                                                                                                                                                                                                       793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109
                                                                                                                                                                                                                                                        CTGCAAACATGAGGACAA------ACAAAGCAGATCCGGAGACAAAGTTAAA
TCCTTATCAGGAACTCAATAAACATCAGCCCGGTCCAGCAACTCATCCACGGGTTTCCTT 1119
                                      AAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAAACCGCTTC 1074
                                                                                                                                                                                                                                                                                                TCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGAAGAACAAAGAAACTGAGACAGA 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGG
                                                                                   TCTCCCTCCTAAATCTGCTGAAGTCAGCCTTCCAGAAAAACGCAGCAGTA-----GCCT
                                                                                                                                                                                                                                                                                                                                           ----TTGTGCCTCCAGGAGAAAAGGAAATCTACTTATCAAAATGAAATAAGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCCTTGCTCTTGATCCTGATCATTGTTTTGATTATAATATTCTGTTGCTG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGGTCCCGGA 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                      AAGTGGAAAGGAAAACTACGGGTACAGTTCGGATGAGGCAAAGGCTGCACAGACTGCATC
                                                                                                                                                                                                                                                                                                                                                                                      TTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTGTTTCTGCTGTAGAAGAAAAAAGAGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTGGTTCAGCCTCCACCTGACAGTATTGGAGAGGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCAGCAAGTCCTTAACTGTCAACCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACACCACTGGGCAACGGGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACTGAGGGTGAACCCTGTAATGTGACTTGCCTATGCCGTGGGCCTGGACCTCACTCCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACACATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTCCCAGGCTCGCATCAACCTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----AGGCCCAGCACTGCCGACCTGGGCCATCATCCTGCTGGCAGTGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCTTCCTCAGTGCAAGTCATGGGGACCCTGAACATTCCTAGCAACAACCTTATAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA
                                                                                   1059
                                                                                                                                                                                                                                                                                                                                             899
                                                                                                                                                                                                                                                                                                                                                                                      954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168
                                                                                                                                                                                                                                                                                                                                                                                                                                 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228
```

Š В

В Ş 밁 멍

Š

Ş

밁

Ş В δõ В Š

В QΨ 밁 Š 뮍 Ş 밁 δÃ В Qy 밁 Q 8 δÃ В Q 밁 Š 망 δÃ

```
RESULT 7
AA136582
ID AA13
XX AA13
AC AA13
XX Prob
XX P
  DЪ
                                                Qγ
                                                                                                         В
                                                                                                                                                    QΥ
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention relates to single exon nucleic acid probes (SENP). The present sequence is one such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placenta. The probes are useful for antenatal diagnosis of human genetic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human genome-derived single exon nucleic acid probes useful analyzing gene expression in human placenta - \dot{}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Penn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 401 BP; 105 A; 98 C; 111 G; 87 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-488897/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200157272-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Probe; microarray; human; placenta; antenatal diagnosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Probe #5268 used to measure gene expression in human placenta sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAI36582 standard; DNA; 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-OCT-2001
  390
                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                  115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                      295
                                                                                                                                                                                                                  270
                                                                                                                                                                                                                                                                      175
                                                                                                                                                                                                                                                                                                                            210
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
CACCTCTCAGAG 401
                                                CACCTCTCAGAG 306
                                                                                                   CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                             CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                      AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGG 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                        190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACATCGCCAGTCCTCAGAAGGTCAGAAATGTGACTTTAGTGTA 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŚEQ ID No 5268; 654pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hanzel DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; 2000US-0180312.
; 2000US-0207456.
; 2000US-0608408.
; 2000US-0632366.
; 2000US-0234687.
; 2000US-0236359.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000GB-0024263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US00663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         15.2%;
99.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 188.8; DB 22; Pred. No. 5e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rank DR;
                                                                                                                                                                                                                                                                                                                                                                                                                               2;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      401;
                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                      294
                                                                                                                                                                                                             329
                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
RESULT 6
ABK13032
ID ABK1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                    Mouse: B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipscriatic; neuroprotective; antidiabetic; haemostatic; antihyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; antiasthmatic; or graft versus host disease; antionatum disease; reproductive disorder; graft versus host disease; antionatum disease; antionatum disease; reproductive disorder; graft versus host disease; antionatum dise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1014
                                                                                                                                                                                                                    DNA encoding mouse B7-like protein, B7-L_m1.
                                                                                                                                                                                                                                                                                 23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                           ABK13032 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            524 CGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTAAATCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTCCGGAGCCCAGCGACCCTTCAAAGTGCAGTGAGCCATCCTGGCTCTGACCCCCACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCTCACCAGAGAAGACATAGACCT 1046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCTCACCAGCGGGCTGATCAACGT 1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAGAAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGGCGTCATTTTGTGTATACTCATTTATGTCTGCCTTCTTGAGCCTCTCACTGTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCC
                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -AATTTCAAAAGAAATCTGAAAAAGAGAAGACAAACAAAGAAACTGAGACAG
                                                                                                                                                                                                                                                                                                                                                                                           CDNA; 1195
allergy;
                                                                                                                                                                                                                                                                                                                                                                                           ВP
  skin
     disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         962
```

```
molecules are useful for alleviating the symptoms associated with diseases involving chronic immune cell dysfunction or to treat autoimmune diseases such as systemic lupus erythematosus, rheumatoid arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for the marrow and organ are also useful as immunosuppressive agents for the marrow and organ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometriosis) and proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (I) plays a role growth and maintenance of cancer cells based on the observation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        endocrinopathy; lymphoproliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Fig 5; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JUN-2000;
28-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200200710-A2
                                                                treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present
                                                                                                                                                                                               proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of tox shock syndrome or allosensitisation due to blood transfusions, and
                                                                                                                                                                                                                                                              transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The polypeptide, polynucleotide encoding it and antibody useful for treating B7-like polypeptide-related disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAU75544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002-130881/17
                                              represents the coding sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-214512P
2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            relates to an isolated B7-like (B7-L) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers 53..1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "B7-like protein, B7-L_m1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schultz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ë
                                              B7-L_m1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /peptide (I).
/ against (I)
/ disorders or
```

are

'n

Matches Query Match

Local Similarity

Conservative

0 Pred. Score 380.6; C; 291 G;

Mismatches No.

Indels

69;

Gaps

4.

Length 1195;

7e-95

Sequence 1195 BP;

313 A; 304 30.7%; 62.4%;

287

T; 0 other; DB 24; 354;

for

```
RESULT 5
AAS92356
ID AAS9
XX
AC AAS9
XX
DT 13-F
XX
DE DNA
XX
                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                     Ş
                                                                                                                                                                                              밁
                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
       DNA encoding novel human diagnostic protein #28160
                                                                                                                                               1085
                                                                                                                                                                                               1025
                                                                                                                                                                                                                                          1006
                                   13-FEB-2002
                                                                                                                                                        1186 GGCTTCTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1239
                                                                                  AAS92356 standard;
                                                                                                                                                                                                                                                                                                905
                                                                                                                                                                                                                                                                                                                                                867
                                                                                                                                                                                                                                                                                                                                                                    807
                                                                                                                                                                                                                                                                                                                                                                                                                         886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   447
                                                                                                                                                                                                                                                                                                                                                                                                                                                  747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   207
                                                                                                                                                                                                                                                                                                          TGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCG
                                                                                                                                            GGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1138
                                                                                                                                                                                           CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTGTTTCTGCTGTAGAAGAAA 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAA 645
                                                                                                                                                                                                                    CTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACA 1185
                                                                                                                                                                                                                                                                                             TGAGACAGAAAGTGGAAAAGACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA
                                                                                                                                                                                                                                                                                                                                                 AAGAG-----
                                                                                                                                                                                                                                                                                                                                                                                              CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTATCAAGTTTACCGAGTTTAGGTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCCTGAAGGCCCGCAAGTCTGCAACTGT 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCATGGATCTGCCTTACCCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACCTCACCTCGGAGATGATCAT
                                 (first entry)
                                                                                CDNA; 1392
                                                                                                                                                                                                                                                                                                                                              -----GAAATCTGAAAAAGAGAAGACAAACAAAGAAAC
                                                                                                                                                                                                                                                                    1125
                                                                                                                                                                                                                                             1024
                                                                                                                                                                                                                                                                                                                                                                     1005
                                                                                                                                                                                                                                                                                                                                                                                              866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       525
                                                                                                                                                                                                                                                                                             964
                                                                                                                                                                                                                                                                                                                                            904
                                                                                                                                                                                                                                                                                                                                                                                                                                               806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                446
```

δÃ DЬ QΥ 밁 Qγ 밁 γQ В QY

464 181 404

AATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACC

523

CTGCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTT

463

180

344 ATCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC 403

ATCCACAATGTGGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGC

AATGACCGCTTCACCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC AATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATC

343

120

Matches Query Match

Local Similarity nes 912; Conserv

Conservative

0;

Score 777.6; DB 23; Pred. No. 9.3e-205; 0; Mismatches 24;

Indels 110; Length

Gaps

283

62.7%; 87.2%;

284 61

```
CC polymerase chain reaction (PCR) primers, oligomers, and for chromosome CC and gene mapping, and in recombinant production of (II). The CC and gene mapping, and in recombinant production of (II). The CC golymcleotides are also used in diagnostics as expressed sequence tags CC for identifying expressed genes. (I) is useful in gene therapy techniques CC to restore normal activity of (II) or to treat disease states involving CC (II). (II) is useful for generating antibodies against it, detecting or CC quantitating a polypeptide in tissue, as molecular weight markers and as CC a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating CC disorders involving aberrant protein expression or biological activity. CC The polypeptide and polynucleotide sequences have applications in CC diagnostics, forensics, gene mapping, identification or biological activity. CC responsible for genetic disorders or other traits to assess biodiversity and cold sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of that and products dependent on DNA and CC amino acid sequences. AAS64197-AAS94564 represent novel human CC diagnostic coding sequences of this patent did not appear in the printed consists of the sequences of this patent did not appear in the printed consists of the sequences of the sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder; ss.
Sequence 1392 BP; 338 A; 361 C; 341 G; 352 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W0200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID No 28160; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001WO-US08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mutations
```

```
ARRESULT 4
ARRESULT 4
ARRESULT ARK 1301
IID ABKIX
XX
XX
ARRESULT ARK 1401
XX
ARRESULT ARK 1501
XX
ARK 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Human; B7-11ke protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antitheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding human B7-like protein, B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABK13031 standard; cDNA; 1139
      28-JUN-2001; 2001WO-US20719
                                                                       03-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-APR-2002
                                                                                                                                       WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCGCTTCTCCCCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCGCCGTCGTTGTTGTGGCTGCCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATCTCACTGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGACTTTGACTTGCGTGGCTACCTGGAAGACCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCGCTTCTCCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCTTCTTTTAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGACAGAAAGTGGAAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGAGGATTTCGTATTCAATTTCAAAAGAAATCTGAAAAAGAAGAGAAGAACAAAGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                  Location/Qualifiers
1..1134
                                                                                                                                                                                                     /*tag= a
/product= "B7-like protein, B7-L_h4"
                                                                                                                                                                                                                                       /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Β₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 753
```

В

87

CTGAAGGGTTCCCAGGCTTCAACTGCACCGTTTCCAGGGCTGGAAGCTCATCAT

146

206 285

345

86

٠.

CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT

GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA

Qy 밁 δÃ

27

106 AGAAGCTGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165

B Qy

286 147

TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT

```
CC miscarriage, preterm labour and delivery and endometriosis) and construction preterm labour and delivery and endometriosis) and construction of preterin scaping are constituted disorders. Antibodies, soluble proteins comprising cc extracellular domains and other regulators of B7-L polypeptides are cuseful for enhancing the immune response to tumours. (I) plays a role in cycowth and maintenance of cancer cells based on the observation of concer including seminal vesicle cancer lung, brain, breast, ovarian, cancer including seminal vesicle cancer, lung, brain, breast, ovarian, ctesticular cancer and cancers of haematopoietic system. B7-L polypeptide cyathway can be manipulated to regulate cytotoxic T-lymphocyte response cc in allograft transplantation, graft versus host disease, T-cell concerned bronker alleviating the symptoms associated with cc diseases involving chronic immune cell dysfunction or to treat autoimmune diseases involving chronic immune cell dysfunction or to treat carbitis, multiple sclerosis, diabetes, immune thrombocytopenic control of the symptoms associated with confident as more disease, Hashimoto's thyroiditis and diabetes melitus. They are are not constant as mand organ
Matches 1102;
                      Best Local Similarity
                                                                                                                                 are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_h4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The polypeptide, polypucleotide encoding it and antibody against (I). useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New B7-like polypeptides, polynucleotides and their modulators, useful for diagnosing, preventing and treating reproductive, immune and proliferative disorders, e.g. cancer and arteriosclerosis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Welcher AA, Sarmiento
                                                                                              Sequence 1139 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002-130881/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Fig 4; 135pp; English.
Conservative
                                                                                              290 A; 300 C; 283 G; 266 T; 0 other;
                      85.8%;
97.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UM, Schultz HJ,
  0
                                             Score 1064;
                      Pred. No. 4.3e-284;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chute
                                                  DB 24;
  10;
  Indels
                                             Length 1139;
  22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) are
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
The polypeptide, polynucleotide encoding it and antibody against (I). useful for treating B7-like polypeptide-related disease, disorders or conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricaic and services of the conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricaic and services are services.
                                                            The invention relates to an isolated B7-like (B7-L)
                                                                                               Claim 1; Fig
                                                                                                                                        New B7-like polypeptides, polynucleotides and their modulators, for diagnosing, preventing and treating reproductive, immune and
                                                                                                                                                                                               P-PSDB;
                                                                                                                                                                                                                                          Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                   WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; B7-like protein; B7-L; antiinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiplicer; antiallergic;
                                                                                                                             proliferative disorders,
                                                                                                                                                                                                                                                                                                      28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1076
                                                                                                                                                                                                                                                                          (AMGE-) AMGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encoding human B7-like protein, B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK13029 standard; cDNA; 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    891
                                                                                                                                                                                                            2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAAACAGTAGCTGTGGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTCACCAGCGGCTGATCAACGTCCACCCAGGCCAGCCAAGTCATCCACAGGCTTCTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAAACCGCTTCT
                                                                                                                                                                                              AAU75541
                                                                                            2; 135pp; English
                                                                                                                                                                                                                                           Sarmiento
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers 8..1168
                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/product= "B7-like protein,
                                                                                                                                                                                                                                           Ä,
                                                                                                                             e.g. cancer and arteriosclerosis
                                                                                                                                                                                                                                        Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВÞ
                                                                                                                                                                                                                                      Chute
                                                                                                                                                        useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            950
                                               are
```

```
δã
                                                                                                В
                                                                                                                                      Q
                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  molecules are useful for alleviating the symptoms associated with CC diseases involving chronic immune cell dysfunction or to treat CC autoimmune diseases such as systemic lupus erythematosus, rheumatoid CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic purpura and psoriasis, chronic inflammatory disease such as purpura and psoriasis, chronic inflammatory disease such as inflammatory bowel disease (Crohn's disease and ulcerative colitis), CC Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ CC transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell CC proliferation, including arteriosclerosis and vascular restenosis. Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensities and hypersensitivity reactions, and for treatment of allergy, asthma and hypersensitivity reactions, and for comphopathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, chrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present of the coding sequence of human B7-L_h2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 1125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide. Hence modulators of (I) are useful for the treatment of cancer including seminal vesicle cancer, lung, brain, breast, ovarian, testicular cancer and cancers of haematopoietic system. B7-L polypeptide pathway can be manipulated to regulate cytotoxic T-lymphocyte response in allograft transplantation, graft versus host disease, T-cell dependent B-cell mediated diseases and autoimmune diseases. B7-L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1168 BP; 299 A; 302 C; 288 G; 279 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proliferative disorders. Antibodies, soluble proteins comprising extracellular domains and other regulators of B7-L polypeptides are useful for enhancing the immune response to tumours. (1) plays a role growth and maintenance of cancer cells based on the observation of
         514
                                                                                                454
                                                    586
                                                                                                                                           526
                                                                                                                                                                                           394
                                                                                                                                                                                                                                      466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seminal vesicle hyperplasia in transgenic mice overexpressing B7-L
                                                                                                                                                                                                                                                                                    334
                                                                                                                                                                                                                                                                                                                                  406
                                                                                                                                                                                                                                                                                                                                                                               274
                                                                                                                                                                                                                                                                                                                                                                                                                      346 CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106 AGAAGCTGTAGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34
TCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAA
                                                                                                                GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT
                                                                                                                                                                                                                                                                                                       GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                        GCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGT
                                                                                                                                                                                                                             TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCG
                                                                                                                                                                                 TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAA
                                                                                                                                                                                                                                                                                                                                                                        CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGACCCACCCGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAAAATGCAAGAGT 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90.2%;
99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 1119; DB 24;
Pred. No. 2.6e-299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                             645
                                                                                                                                    585
                                                                                                                                                                                 453
                                                                                                                                                                                                                                                                             393
                                                                                                                                                                                                                                                                                                                          465
                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                                                                                                   405
                                                                                                                                                                                                                                                                                                                                                                                                                                                              273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in
```

```
CC polypeptide. Hence modulators of (1) are useful for the treatment of compressing the seminal vesicle hyperplasia in transgenic mice overexpressing B7-L polypeptides are cc useful for enhancing the immune response to tumours. (1) plays a role in crowth and maintenance of cancer cells based on the observation of cc seminal vesicle hyperplasia in transgenic mice overexpressing B7-L cc polypeptide. Hence modulators of (1) are useful for the treatment of cc cancer including seminal vesicle cancer, lung, brain, breast, ovarian, cc testicular cancer and cancers of haematopoietic system. B7-L polypeptide cc pathway can be manipulated to regulate cytotoxic T-lymphocyte response cc in allograft transplantation, graft versus host disease, T-cell cc molecules are useful for alleviating the symptoms associated with cc diseases involving chronic immune cell dysfunction or to treat cautoimmune diseases such as systemic lupus erythematosus, rheumatoid cc arthritis, multiple sclerosis, diabetes, immune thrombocytopenic cc purpura and psoriasis, chronic inflammatory disease such as consistent of the symptoms associated with cc of disease unaltiple sclerosis, diabetes, immune thrombocytopenic conflammatory bowel disease (Crohn's disease and ulcerative colitis), conflammatory disease und ulcerative colitis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; endocrinopathy; lymphoproliferative disorder; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK13028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK13028 standard; cDNA; 1175 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an isolated B7-like (B7-L) polypeptide (I). The polypeptide, polypucleotide encoding it and antibody against (I) useful for treating B7-like polypeptide-related disease, disorders o conditions including reproductive disorders (e.g. infertility, miscarriage, preterm labour and delivery and endometricsis) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; B7-like protein; B7-L; antlinfertility; gynaecological;
antitumour; cytostatic; immunosuppressive; antiarthritic; antirheumatic;
antlinflammatory; dermatological; antipsoriatic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2000; 2000US-214512P
28-NOV-2000; 2000US-0729264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200200710-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig 1; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAU75540.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Welcher AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUN-2001; 2001WO-US20719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic;
                    Grave's disease, Hashimoto's thyroiditis and diabetes mellitus. They are also useful as immunosuppressive agents for bone marrow and organ transplantation or to prolong graft survival. B7-L molecules are also useful for diagnosis and treatment of diseases involving abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New B7-like polypeptides, polynucleotides and their modulators, useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-130881/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorders, e.g. cancer
  including arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers 27..1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product= "B7-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B7-like protein, B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and treating reproductive, immune and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  :
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B7-L_h1"
                                                                                                                                                                                                                                                                                                          B7-L polypeptide
                           abnormal cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     are
```

```
å,
                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                            Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ъ
В
                                δÃ
                                                                       В
                                                                                                       Š
                                                                                                                                              В
                                                                                                                                                                              ρ
                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 1124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and lymphoproliferative disorders such as multiple myeloma. The present sequence represents the coding sequence of human B7-L_h1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1175 BP; 295 A; 307 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236
                                                                                                                                                                                                                     651
                                                                                                                                                                                                                                                                                                                              656
                                                                                                                                                                                                                                                                                                                                                                                                                                            471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296
                                                                         771
                                                                                                           836
                                                                                                                                              711
                                                                                                                                                                                  776
                                                                                                                                                                                                                                                       716
                                                                                                                                                                                                                                                                                            591
                                                                                                                                                                                                                                                                                                                                                                   531
                                                                                                                                                                                                                                                                                                                                                                                                       596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGC 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGC 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTGACATGGTGGTGGTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC
                                                                                          ACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCGCCGTCGT
                                                                                                                                                                                                                                        GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT 775
                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGACATGGTGGTGCTAAGCGTCAGGCCCCATGGAGCCCATCATCACCAATGACCGCTTC
 TGTTGTGGCTGCAACTGCTGCCGCTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTT
                                  TGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTGTTTCTGCTGTAGAAGAAAAAGAGGATTT
                                                                         ACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGT
                                                                                                                                              TTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGC
                                                                                                                                                                                TTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGC
                                                                                                                                                                                                                       GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT
                                                                                                                                                                                                                                                                                            ACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACT
                                                                                                                                                                                                                                                                                                                                ACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACT
                                                                                                                                                                                                                                                                                                                                                                     AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                       AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1123.4; DB 24; Length 1175; Pred. No. 1.6e-300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            286 G; 287 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                                                                        835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 355
                                                                                                                 895
                                                                                                                                                                                                                                                                                                                                                                         590
                                                                                                                                                                                                                                                                                                                                                                                                             655
                                                                                                                                                                                                                                                                                                                                                                                                                                                  530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       350
       890
                                                                                                                                                                                                                                                                                                    650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
```

956

28-JUN-2000; 28-NOV-2000;

2000US-214512P 2000US-0729264

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REXERNATION OF THE PROPERTY OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC The invention relates to an isolated B7-like (B7-L) polypeptide (I). CC The polypeptide, polynucleotide encoding it and antibody against (I) are CC useful for treating B7-like polypeptide-related disease, disorders or CC conditions including reproductive disorders (e.g. infertility, CC conditions including and other regulators of B7-L polypeptides are CC useful for enhancing the immune response to tumours. (I) plays a role in CC convert and maintenance of cancer cells based on the observation of CC seminal vesicle hyperplasia in transgenic mice overexpressing B7-L collpeptide. Hence modulators of (I) are useful for the treatment of CC cancer including seminal vesicle cancer, lung, brain, breast, ovarian, CC testicular cancer and cancers of haematopoietic system. B7-L polypeptide CC pathway can be manipulated to regulate cytotoxic T-lymphocyte response CC in allograft transplantation, graft versus host disease. B7-L CC molecules are useful for alleviating the symptoms associated with CC diseases involving chronic immune cell dysfunction or to treat cutoimmune diseases such as systemic lupus erythematosus, rheumatoid CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC arthritis, multiple sclerosis, diabetes, immune thrombocytopenic CC inflammatory bowel disease (Crohn's disease and ulcerative colitis), CC caref's disease, Hashimoto's thyroiditia and diabetes mellitus. They care also useful as immunosuppressive agents for bone marrow and organ CC useful for diagnosis and treatment of diseases involving abhormal cell coliferation, including arteriosclerosis and vascular restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferation, including arteriosclerosis and vascular restenosis.

Antagonists of B7-L polypeptides are useful for alleviation of toxic shock syndrome or allosensitisation due to blood transfusions, and for treatment of allergy, asthma and hypersensitivity reactions, nephropathies (e.g. glomerulonephritis), skin disorders (pemphigus and pemphigoid), endocrinopathies (Grave's disease), various pneumopathies (extrinsic alveolitis), vasculopathies, coeliac disease, anaemia, thrombocytopenias, Guillain-Barre syndrome and myasthenia gravis, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Fig 3; 135pp; English.
                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher AA,
                                                 181
                                                                                                                                            121 TGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCA 180
                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                              ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AGGTGTGAGTCCAGCCAACAGTGTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCAT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B7-like polypeptides, polynucleotides and their modulators, useful diagnosing, preventing and treating reproductive, immune and liferative disorders, e.g. cancer and arteriosclerosis
                              GECTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGA
                                                                                                      TGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCA
                                                                                                                                                                                                                                                                                        AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGTTC 120
                                                                                                                                                                                                                                                                                                                                                                                               AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGTTC
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarmiento UM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schultz HJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1240;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chute HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                     240
                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

Š 멍 Ş 밁

```
Qy
                                                                                                                                        В
                                                                                                                                                                       Qγ
                                                                                                                                                                                                         рь
                                                                                                                                                                                                                                        QY
                                                                                                                                                                                                                                                                                                         Qγ
                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                           Qγ
                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΔÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뭥
                                    1201
                                                                    1141
                                                                                                                                        1081
                                                                                                                                                                         1081
                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                               901
                                                                                                                                                                                                                                                                                                                                                                                                               841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 TCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241 CATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 CATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181 GGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGA 240
                GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                    CCAGCGGCTGATCAACGTCCACCCAGGCCAGCAGGTCATCCACAGGCTTCTTTAATCT
GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                CCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTTAATCT
                                                                                                                                   TCCCANATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCA
                                                                                                                                                     TCCCAPATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGGCCCTCCTCA 1140
                                                                                                                                                                                                      AAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCTCCCC
                                                                                                                                                                                                                      AAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCTCTCCC
                                                                                                                                                                                                                                                                                                     TGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGAT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGA
                                                                                                                                                                                                                                                                      TGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                             GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGTTTAGGTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGGGAGCTCGGTCTCGGTCAGCCATTCAAGCTATTATTTTTTTCCGGAGCCCAGCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGATATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGGCTCCCGGGATATTTC 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTA 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAGAGGTACGACCAGGGCGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCC
                                                                1200
                                                                                                                                                                                                                                    1080
                                                                                                                                                                                                                                                                                                       1020
                                                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                                                        1020
                                                                                                                                                                                                                                                                                                                                         960
                                                                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
```

```
OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2185239 seqs, 1125999159 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 aggtgtgagtccagccaaca.....gtaatacaactgtagtatag 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-729-264-5
1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             April 28, 2003, 23:25:03; Search time 300.05 Seconds (without alignments) 9306.701 Million cell updates/sec
                                                                                                                                                                                                       10:
11:
12:
13:
14:
15:
16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1982.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1983.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1986.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/
                                                                                                                                                                                                                                                                             /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
/SIDS2/gcgdata/geneseg/genesegn-embl/NA2001A.DAT:*
/SIDS2/gcgdata/geneseg/genesegn-embl/NA2001B.DAT:*
/SIDS2/gcgdata/geneseg/genesegn-embl/NA2002.DAT:*
                                                                                                                                                              /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1994.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1995.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1996.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997.DAT:*
                                                                                                         /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1998.DAT:*
/SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:*
                                                                                     /SIDS2/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'geneseqn-embl/NA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4370478
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

9 18	8 18:	7 188	6 380	5 777.6	4 10	3 11	2 1123	1 1;	Result No. Score
				7.6 62.7					. (D
				7 1392					% Query Match Length DB
24	24	22	24	23	24	24	24	24	•
250513B4	ABK13034	AAI36582	ABK13032	AAS92356	ABK13031	ABK13029	ABK13028	ABK13030	ID
DNA encoding mouse	DNA encoding mouse	Probe #5268 used t	DNA encoding mouse	DNA encoding novel	DNA encoding human	DNA encoding human			Description

03-JAN-2002.

28-JUN-2001; 2001WO-US20719

O O	С			C	O	C	C	C	C	C				C			C	C	C	ი	O	C	C	O	C	a	O			O	C	Ω		O
44	43	42	41	40	39	38	37	36	3 5	34	ယ ယ	32	<u>3</u> 1	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10
45.2 45			45.4	45.4	45.4	45.4	45.6	45.6	45.8	45.8	45.8	46	46.2	46.4	46.4	σ	σ.	6	46.6	46.6	46.6	7	7		œ		œ		Q	\vdash	Ĺ	۰	52.8	w
	3.6	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7		3.7															4.2	4.2		4.3	4.3
5397 462	2134	5447	5215	3135	3042	578	3884	1509	8821	2682	405	513	381	14152	14152	4044	1983	14208	2333	759	300	22341	3894	2733	4180	3217	3217	46954	742	403	397	389	7029	277
23	22	23	23	23	23	22	23	23	23	23	23	23	23	22	22	23	23	22	22	20	20	23	23	20	10	12	10	23	22	21	20	21	23	21
ABL29/5/ ABL26941	AAF93812	ABL25652	ABL28444	ABL25653	ABL28445	AAS30941	ABL24570	ABL24571	ABL16096	ABL16097	ABV56338	ABV47976	ABV54466	AAK82884	AAS36073	ABL24482	ABL24483	AAK78411	AAF75339	AAX98974	AAX98588	ABL03352	ABL03353	AAX84442	AAN91773	AAQ12002	AAN91578.	ABL16830	AAI95221	ABK10240	AAX89891	ABK10248	ABL29756	ω
Drosophila melanog						-					ct		Human prostate exp	Human immune/haema	Human cardiovascul	Drosophila melanog	Drosophila melanog	Human immune/haema	Human TGF-beta rec	Human validated ca	Human cancer cell	Drosophila melanog	Drosophila melanog	Mouse brain CNG-1	Rat androgen recep	Full-length rat an	Rat androgen recep	Drosophila melanog	Human neuroblastom	Trinucleotide repe	Spinocerebellar at	Tri-nucleotide rep	Drosophila melanog	Trinucleotide repe

ALIGNMENTS

ABK13030 standard; cDNA; 1240 BP

RRESULT 1
ABK13030
ID ABK13030
AC ABK1
XX ABK1
XX ABK1
XX DT 23-A
DT 23-A
DT 23-A
XX Huma
KW Huma
KW Anti
KW Anti
KW anti
KW Erept
KW toxi
KW toxi
KW endo
XX EPT
CDS
FT CDS
FT CDS
YX W020
XX W03-J
PP 03-J
PP 28-J Human; B7-like protein; B7-L; antlinfertility; gynaecological; antitumour; cytostatic; immunosuppressive; antlarthritic; antlineumatic; antiinflammatory; dermatological; antipsoriatic; neuroprotective; antidiabetic; haemostatic; antithyroid; antiulcer; antiallergic; antiasthmatic; nephrotropic; antibacterial; virucide; tumour; cancer; reproductive disorder; graft versus host disease; autoimmune disease; toxic shock syndrome; allergy; nephropathy; skin disorder; gendocrinopathy; lymphoproliferative disorder; gene; ss. DNA encoding human B7-like protein, B7-L_h3. 23-APR-2002 ABK13030; Homo sapiens WO200200710-A2 (first entry) Location/Qualifiers 80..1240 /*tag= a /product= "B7-like protein, B7-L_h3"

Search completed: April 29, 2003, 14:51:53 Job time : 4716.78 secs

```
Query Match
Best Local Similarity
 Matches
                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                         repeat_region
                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
 119;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="GRAIL, score = 45.000%, comment = marginal shadow"
/evidence=not_experimental
complement(18219. 18349)
                                                                                                       complement(22325. .22806)
                                                                                                                                           complement(21504. .21756)
/note="MZEF, score = 79.4%"
                                                                                                                                                                                                                   /evidence=not_experimental.
/rpt_family="MLT1F"
21483...21781
                                                                                                                                                                                                                                                                            20961. .21007
                                                                                                                                                                                                                                                                                                                               /rpt_family="120645. .20910
                                                                                                                                                                                                                                                                                                                                                                                      20223. .20643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
19945. .20020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /evidence=not_experimental
complement(19501. .19881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
complement(19379. 19399)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(19252..19399)
/note="GRAIL, score = 71.000%, comment =
/note="GRAIL, score = 71.000%, comment = 71.000%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /evidence=not_experimental complement(18717. .19211)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(17805. .17864)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(17540. .17675)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /evidence=not_experimental \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="MZEF, score = 93.5%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(16623. .16714)
/note="GRAIL, score = 72.000%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /evidence≃not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimenta.
15369. .16268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="GC score = 10.60 (249bp); Region: GC content"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
19269. .19350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="GenScan, score = 2.99%, comment = Internal_exon 131
bp frame: 1 phase: 2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="LTR16C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
                                                                                        /evidence=not_experimental
                                                                                                                        /evidence=not_experimental
                                                                                                                                                                               /evidence=not_experimental
/rpt_family="AluJb"
                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/rpt_family="MLTlF"
                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
/rpt_family="MLT1E"
                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="homology = 100.00%, score = 38, counts = 2"
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="MZEF, score = 50.6%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Xpound exon prediction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="GRAIL, score = 81.000%, comment = excellent shadow"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="MLTIC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
                                                                     /rpt_family="MLT1C"
                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_type=tandem
               9.6%; Score 119; DB 9;
100.0%; Pred. No. 1.7e-17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="MERVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="MLT1C"
                                                                                                                                                                                                                                                                                                                                                                                                     _unit=ttcttgcacacttctctgttgagaggtcggtttatcgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="MLT1C"
 0;
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       comment =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   score = 60% (0%)"
                                  Length 40205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     good"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          good"
 0
 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
AF064860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                            BASE COUNT
                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
   Matches 119;
                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                      source
 Conservative
```

```
QΥ
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18754 AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGTT 18812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18694 AGGTGTGAGTCCAGCCAACAGTGTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCAT 18753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGTT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rattorl, Fujiyama, A., Taylor, T.D., Watanabe, H., Yada, T.,
Park, H.-S., Toyoda, A., Ishii, K., Totoki, Y., Choi, D.-K., Soeda, E.,
Ohki, M., Takagi, T., Sakaki, Y., Taudien, S., Blechschmidt, K.,
Polley, A., Menzel, U., Delabar, J., Kumpf, K., Lehmann, R.,
Patterson, D., Reichwald, K., Rump, A., Schillhabel, M.B., Schudy, A.,
Zinmermann, W., Rosenthal, A., Kudoh, J., Kawasaki, K., Asakawa, S.,
Shintani, A., Sasaki, T., Nagamine, K., Mitsuyama, S.,
Antonarakis, S.E., Minoshima, S., Shimizu, N., Nordsiek, G.,
Hornischer, K., Brandt, P., Scharfe, M., Schoen, O., Desario, A.,
Hennig, S., Riesselmann, L., Dagand, E., Haaf, T., Wehrmeyer, S.,
Borzym, K., Gardiner, K., Nizetic, D., Francis, F., Lehrach, H.,
Reinhardt, R., and Yaspo, M. Laure.
The DNA sequence of human chromosome 21
Nature 405 (6784), 311-319 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGTGTGAGTCCAGCCAACAGTGTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AF064860 170121 bp DNA linear PRI 05-MAR-2002 Homo sapiens chromosome 21 clone PAC 70124 map 21q22.3, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 170121)
Rump,A., Dagand,E., Hildmann,T., Nordsiek,G., Drescher,B., Weber,J., Schattevoy,R., Yaspo,M.-L. and Rosenthal,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 170121)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Biotechnology, Beutenbergstr. 11, Jena 07745, Germany On Feb 27, 2002 this sequence version replaced gi:3171153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (05-MAR-2002) Genome Analysis, Institute of Molecular Biotechnology, Beutenbergstr. 11, Jena 07745, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (27-FEB-2002) Genome Analysis, Institute of Molecular Biotechnology, Beutenbergstr. 11, Jena 07745, Germany 4 (bases 1 to 170121)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rump,A., Dagand,E., Hildmann,T., Nordsiek,G., Drescher,B., Weber,J., Schattevoy,R., Yaspo,M.-L., Rosenthal,A., Yaspo,M.-L. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (12-MAY-1998) Genome Analysis, Institute of Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF064860.2 GI:18958624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rump,A., Dagand,E., Hildmann,T., Nordsiek,G., Drescher,B. Weber,J., Schattevoy,R., Yaspo,M.-L. and Rosenthal,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rosenthal,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10830953
                                                                                                                                                   45184 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 170121)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTGS_DRAFT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens.
                                                                                                                                    /map="21q22.3"
/map="21q22.3"
/clone="PAC 70124"
/36756 c 37509 g 50672 t
                                                                                                                                                                                                                                                        /chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                   /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
9.6%; Score 119; DB 9; 100.0%; Pred. No. 1.8e-17;
                                  Length 170121;
```

0;

Mismatches

0

0; Gaps

0,

<pre>repeat_region complement(43304433) /evidence=not_experimental /rpt_family="L2" exon</pre>	repeat_region complement(3221. 3658) /evidence=not_experimental /rpt_family="MLTIC" exon 3359. 3395 /note="Xpound exon prediction, score = 84% (0%)" /evidence=not_experimental /evidence=not_experimental /evidence=not_experimental	/evidence=not_experimental /rpt_family="HERVL" repeat_region complement(2296. 3220) /evidence=not_experimental /rpt_family="HERV16" exon	repeat_region complement(043. 944) /ret_family="MERVL" exon complement(1053. 1176) /note="GenScan, score = 5.19%, comment = Internal_exon 124 bp frame: 2 phase: 1" /evidence=not_experimental repeat_region complement(1251. 1859)	/organism="Homo /db_xref="taxon: /chromosome="21" /map="21922.3" /clone="cosmid Q complement(293 /evidence=not_ex /rpt_family="Alu	Taudien,S. Weber,J., Direct Sub Submitted Biotechnol	AF045450.1 GI. HTG. HOMO Sapiens. HOMO Sapiens Eukaryota; Meta Mammalia; Euther 1 (bases 1 to Taudien, S. and Unpublished	UULT 14 045450 AF045450 TUS AF045450 40 TUS AF045450 Chromosome 2	Db 120352 GCTTCACCTATGCCAGTTACAACAGCACTGACAGCTCCAGAACAGCATGATCATCTCGGAGTTGATCATCATCATG 120293 Qy 351 ATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATG 410
	exon complement(11828: .11949) /note-"GRAIL, score = 50.000%, comment = good" /evidence=not_experimental repeat_region 12623: .12843 /evidence=not_experimental /evidence=not_experimental /rpt_family="AluSx" repeat_region 13102: .13457 /evidence=not_experimental /rpt_family="THBIB"	/evidence=not_experimental complement(11687. 11735) /evidence=not_experimental /rpt_family="MIR" at_region complement(11774. 11230) /evidence=not_experimental /rpt_family="MLT1E"	<pre>repeat_region 1147811597 /evidence=nct_experimental /rpt_family="L2" exon 1157011704 exon /note="MXZEF, score = 66.1%" /evidence=nct_experimental exon 1157011704 exon 115701704 exon 115701704 /note="GRAIL, score = 99.000%, comment = excellent shadow"</pre>	/evider /rpt_fc comple= /note= /note= /note= /evider	repeat_region 92599647 /evidence=not_experimental /rpt_family="LIMC3" repeat_region complement(1013810427) /evidence=not_experimental /rpt_family="MLT2E" repeat_region 1066210875	/evidence=not_experimental /rpt_family="MERIA" 88378876 ##ROIN ## 15.00% comment = good shadow" /evidence=not_experimental exon	t_region (repeat_region complement(51137899) /evidence=not_experimental /rpt_family="LipAl4" exon complement(61196598) /note="GRAIL, score = 63.000%, comment = good" /evidence=not_experimental repeat_region complement(9278045) /evidence=not_experimental /rpt_family="FLAM_A" repeat region 8048.8178

```
28836 28935: gap of 100 bp
28936 29562: contig of 627 bp in length
29563 29662: gap of 100 bp
30329 30428: gap of 100 bp
30429 30005: contig of 666 bp in length
30329 30428: gap of 100 bp
31105: gap of 100 bp
32106 33128: contig of 1023 bp in length
33129 33228: gap of 100 bp
34512: contig of 1023 bp in length
34613 34612: gap of 100 bp
34613 36179: gap of 100 bp
36080 36179: gap of 100 bp
37684 37583: gap of 100 bp
377584 37583: contig of 1467 bp in length
36180 36179: gap of 100 bp
37684 37583: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 22 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    provided by the submittor.

This sequence will be replaced by the finished sequence as soon as it is available and the accession number will be preserved.

1 28835 contig of 28835 bp in length 28836 28935; gap of 100 bp 100 print 100 pr
                                                                                                                                                                                                                                                                                                                                                                                                                                   37564 39166: contig of 1583 bp in length
39167 39266: gap of
41065 100 bp
41166 41155: gap of
41066 41155: gap of
41066 41155: gap of
4106 4303: contig of 2038 bp in length
43204 43303: gap of
47489 contig of 4186 bp in length
47590 50604: contig of 3015 bp in length
50605 50704: gap of
506705 56370: contig of 5666 bp in length
56371 56470: gap of
56471 64079: contig of 5666 bp in length
64080 64179: gap of
64080 64179: ga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Quality coverage: 8.3 in Q20 bases; agarose-fp Quality coverage: 8.4 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Consensus quality: 169879 bases at least Q40 Consensus quality: 172188 bases at least Q30 Consensus quality: 173133 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequencing vector: Plasmid; n/a; 100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center project name: L20921
Center clone name: 147_E_11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chemistry: Dye-terminator Big Dye; 100% of Assembly program: Phrap; version 0.960731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Insert size: 176000; agarose-fp
Insert size: 173761; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Assembly program: Phrap;
                                                                                                                                                                                                                                                                                                                          119648 119747: gap of 100 bp
119748 147772: contig of 28025 bp in length
                                                                     174558 174657: gap of 174658 175861: conti
                                                                                                                                                                              100 bp 1747872: gap of 100 bp 1747873 174557: contig of 26685 bp in length
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Project Information
                                                              contig of 1204 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
f 1583 bp in length
                                                                                                                                           dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
```

FEATURES

Qy 291 GCTTCACCTC	Qy 231 CTCTCAGTGA	Qy 172 GGGCTCCCAC Db 120472 GGACTCAGAC	Qy 112 TGTAGGTTC9	Query Match Best Local Similar Matches 239; Cor	BASE COUNT 48903 ORIGIN		misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature	misc_feature		misc_feature		SOUTCE	מכדווכם								
TCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACA 3	CTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACC 2	GGGCTCCCAGGCTCGACTGCACCGCCGCCGCGGGCTGGAAGCTCATCATGTGGG 2	TGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAA 1	14.2%; Score 176.4; DB 2; Length 175861; imilarity 73.3%; Pred. No. 4.2e-31; Conservative 0; Mismatches 86; Indels 1; Gaps	a 39540 c 39029 g 46286 t 2103 others	/note="assembly_iragment clone_end:T7 rector side:right"	fragmen	tragment	147772	11	.96774	.81566	.72619	.64079	assembly_ragment	assembly_I .50604	.47489	.43203 .esembly_fragment	agment.	39166	.37483	assembly_f	assembly_tr .34512	.33128	32005	.30328	.29562	/note="assembly_itagment clone_end:SP6	t 20 remate mouse pro	ž	/organism="Mus musculus" /or vrof="tavon:10000"	1 175861
350	290 120353	230 120413	171 120473	ŭ																												

```
Q
                                                                                                                               В
                                                                                                                                                                            δÕ
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SdO
                                                                             415 TGCTTACCTTACCGTCCAAG 434
                                                                                                                                                                                                                                                                                                                                                                                                                   171 CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                   355 GGAGCCCAGTGATTCGGGGGAACAGCAGACGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                  295 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                 231 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                              291
                                                                                                                                                                                                                                                                                                                                                  235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                TGCCTTCCTCAGTGCAAG 430
                                                                                                                          GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                       CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at http://lmage.llnl.gov Series: IRAK Plate: 10 Row: m Column: 23
This clone was selected for full length sequencing because it passed the following selection criteria: Hexamer frequency ORF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www.hgsc.bcm.tmc.edu/cdna/
Contact: amgebcm.tmc.edu
Gunaratre, P.H., Garcia, A.M., Lu, X., Hulyk, S.W., Hale, S.M.,
Yoon, V.S., Kowis, C.R., Lawrence, S., Martin, R.G., Muzny, D.M.,
Richards, S., Gibbs, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gllbert Smith, Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Baylor College of Medicine Human Genome
Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: BCM-HGSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
NCTVTHGWKLLMWTLNQMVVLSLTTQGPIITNNRFTYASYNSTDSFISELIIHDVQPS
DSGSYQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILAVAFSLLLILIIVLIII
FCCCCASRREKEESTYQNEIRKSANMITNKADPETKLKSGKENYGYSSDEAKAAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
364 c 367 g 378 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="RIKEN cDNA 2010003D20 gene"
/protein_id="AAH04806.1"
/db_xref="GI:13435933"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="Mammary tumor. Metallothionien-TGF alpha
model. 10 month old virgin mouse. Taken by biopsy."
/clone_lib="NCI_CGAP_Mam1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="LocusID:72058"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="MGC:7960 IMAGE:3584645"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="Vector: pcmv-sport6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15.0%;
73.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 185.6; DB 10;
Pred. No. 2.2e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1556;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Gaps
                                                                                                                                                                                                                         350
                                                                                                                                                                                                                                                                                                                         290
                                                                                                                                                                                                                                                                                                                                                                                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AC120346/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                    Submitted (09-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On May 9, 2002 this sequence version replaced gi:20503171. All repeats were identified using RepeatMasker: Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC120346 175861 bp
Mus musculus clone RP23-147E11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus, clone RP23-147E11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC120346.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 175861)
```

Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chong, J., Chong, J., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Tliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., Macchan, C., Macchan, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Nguyen, C., Nicol, R., Norbu, C., Norman, C. H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Raymond, C., Retta, R., Rieback, M., Riley, R., Rise, C., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Stanuss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Wilson, B., Wu, X., Wyman, D., Ye, W. J., Young, G., Zalhoun, J., Zembek, L., Zimmer, A. and Zody, M. Cook, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Farreira, P., FitzHugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Gord, S., Goyette, M., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Marquis, N., Matthews, C., McCarthy, M., McEwan, P., McKernan, K., Marquis, N., Matthews, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J., Myuyen, C., Nicol, R., Morbu, C., Norman, C.H., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Chauer, J., Peterson, K., Phunkhang, P., Pierre, N., Pollara, V., Rogov, P., Roman, J., Rosetti, M., Roy, A., Santos, R., Schauer, S., Schupback, R., Seaman, S., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Viel, R., Vo, A., Milson, B., Wu, X., Wyman, D., Ye, W.J., Young, G., Jainoun, J., Zembek, L., Zimmer, A. and Zody, M. Submitted (06-MAY-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA 3 (bases I to 175861) Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson,S., Barna,N., Bastien,V., Bloom,T., BoguslavKiy,L., Boukhgalter, B., Brown, A., Camarata, J., Campopiano, A., Chang, J., Chazaro, B., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 175861)
Birren,B., Linton,L., Nusbaum,C. and Lander,E. Birren,B., Linton,L., Nusbaum,C., Lander,E., Ali,A., Allen,N., Anderson,S., Barna,N., Bastien,V., Bloom,T., Boguslavkiy,L., HTG; HTGS_PHASE2; HTGS_DRAFT; HTGS_FULLTOP WORKING DRAFT SEQUENCE, DNA linear HTG 22 ordered 09-MAY-2002

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
                                                                 DEFINITION ACCESSION
                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                   Ω
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX380408
                                                                                                                  AX380406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POCAR
                 SOURCE
                                                                                                    LOCUS
                                                                                                                                      RESULT 11
                                 KEYWORDS
                                                   /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115
                                                                                                                                                                                     409
                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                        349
                                                                                                                                                                                                                                                                                        355
                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                            235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                                           229 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 168
                                                                                                                                                                                       TECCTTCCTCAGTECAAG
                                                                                                                                                                                                                       TGCTTACCTTACCGTCCAAG 434
                                                                                                                                                                                                                                                      GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                      GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                        CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                         CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al Similarity
236; Conserv
                                                             895 bp
Sequence 11 from Patent W00200710.
 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B7-11ke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX380408.1 GI:19575338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13 from Patent WO0200710. AX380408
                                                 AX380406.1 GI:19575336
                 house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 molecules and uses thereof WO 0200710-A 13 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SDEAKAAQTASLPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVR
NVTLV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="megswrdvlavlv1laQltaSgSSYQ11egpQnvtvlkdSeAHF
NCTVTHGWKLLMWTLNQMVVLSLTTQGP11TNNRFTYASYNSTDSF1SEL11HDVQPS
DSGSVQCSLQNSHGFGSAFLSVQESTYQNE1RKSANMRTNKADPETKLKSGKENYGYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /protein_id="CAD28222.1"
/db_xref="GI:19575339"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15.0%;
73.8%;
                                                                                                                                                                                         428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                175 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 185.6; DB 6
Pred. No. 2.2e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     168
                                                                                                    ANG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 18-MAR-2002
                                                                                                      PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              294
                                                                                                                                                                                                                                                                                                                                                                                                                                                               228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               234
                                                                                                                                                                                                                                                                                                                           348
                                                                                                                                                                                                                                                                                                                                                                                              288
```

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                         RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                     BC004806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                      ORGANISM
                                                                              JOURNAL
                                                                                                      TITLE
REMARK
                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                      409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   349 GCAGCCCAGTGACTCGGGATCCGTGCAATGCCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         355 GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229 TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  289 CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTTACCTTACCGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCTTCCTCAGTGCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B7-like molecules and uses thereof Patent: WO 0200710-A 11 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                    Submitted (21-MAR-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                        Mus musculus, RIKEN cDNA 2010003D20 gene, IMAGE: 3584645, mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Welcher, A.A., Sarmiento, U.M.,
                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                      Mus musculus
NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                    Direct Submission
                                                                                                                       Strausberg, R
                                                                                                                                                                                                                                                                 BC004806.1
                                                                                                                                                                                                                                                                                                                                                  BC004806
                                                                                                                                                                                                                           nouse mouse
                                                                                                                                        (bases 1 to 1556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="CAD28221.1"
/db_xref="GI:19575337"
/translation="MEGSWRDVLAVLVILAQLTASGSSYQIIEGPQNVTVLKDSEAHF
/CTPHGWKLLMWTLAQUVLSLTTOGPIITNNRFTYASYNGTUSFISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQDSIGEEGPALPTWAIILLAVAFSLLLILIIVLIII
FCCCCASRREKEESTYQNEIERSANNETNKADPETKLKSGKENYGYSDEAKKAQTAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPPKSAEVSLPEKRSSSLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV" 223 c 212 g 210 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Mus musculus"
                                                                                                                                                                                                                                                                   GI:13435932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 185.6; DB 6
Pred. No. 2.2e-33;
                                                                                                                                                                                                                                                                                                                                                    1556 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schultz, H.J. and Chute, H.T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84;
                                                                                                                                                                                                                                                                                                                                 clone MGC:7960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 895;
                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                    ROD 07-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      228
                                                                                                                                                                 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                               Consensus quality: 164618 bases at least Q40
Consensus quality: 180887 bases at least Q30
Consensus quality: 183777 bases at least Q20
Estimated insert size: 147000; pulse field gel estimation
Estimated insert size: 193700; sum-of-contigs estimation
Quality coverage: 5.67 in Q20 bases; pulse field gel estimation
Quality coverage: 4.3 in Q20 bases; sum-of-contigs estimation
* NOTE: This is a 'working draft' sequence. It currently
* consists of 33 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        196900 bp DNA linear HTG
Mus musculus clone RP21-467L12, WORKING DRAFT SEQUENCE,
unordered pieces.
AC020851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (10-JAN-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA on Jul 15, 2000 this sequence version replaced gi:6886457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: Joint Genome Institute Center Code: JGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 196900)
DOE Joint Genome Institute.
Sequencing of Mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center clone name: RPCI-21_467L12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC020851.2 GI:9211212
HTG; HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center Project Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jnpublished
                                                                                                                                                                                                                                                                                                                                                            as soon as it
be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 196900)
Joint Genome Institute.
                                                                                          18493
21232
·21332
                          27141
27241
29951
                                                                24663
24763
                                                                                                                               18393
                                                                                                                                                                      13608
13708
                                                                                                                                                                                                           11494
                                                                                                                                             16047
                                                                                                                                                        15947
                                                                                                                                                                                             11594
                                                                                                                                                                                                                                                           4839
7249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submission
                                                                                                                                                                                                                                                                                                                                                                       it is available and the accession number will
                                                                                                                                                                    15946:
                                                                                                                               18492:
                                                                                                                                           18392:
                                                                                                                                                         16046:
                                                                                       gap o
                                                                                                                              gap
                                                                                                                                                     gap
                                                                                                                                                                                                                                  gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1437240
                                                                                                                                                                              gap o
                                                                                                                                                                                                        gap o
                                                                                                                                                                                                                                                                                  gap o
                                                                                                                                                                                                                                                                                                                                                contig
unknown
of 2378
unknown
of 2710
unknown
of 2195
unknown
                                                                                                                                         unknown
of 2346
                                                                                                                                                                  unknown
of 2239
                                                                                                                                                                                                                                                                     unknown
of 1851
unknown
of 1146
unknown
of 2410
                                                                                                                 of
                                                                                       of 3331
                                                                                                                              unknown
                                                                                                                                                                                            of 2014
                                                                                                                                                                                                                    of 2215
                                                                                                                                                                                                                                            of 1830
                                                                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                                                                                                                                               of 1541
                                                                                                    unknown
                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                  unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                 2739
            bp in length
                                                                                                                                                     bp in ]
                                                                                                                                                                              bp in length
                                                                                       length
bp in 1
                                                                                                                                          ďď
                                                                                                                                                                                                                    đđ
                                                                                                                                                                                                                                            ďď
                                                                                                                                                                                                                                                                                              ďď
                                                                                                                                                                                                                                                                                                                     ďď
                                                             bp in
                                                                                                                 dq
                                                                                                                                                                                                                                                                                                                                               bp in length
                                                 length
                                                                           length
                                                                                                                           length
                                                                                                                                                                                                        length
                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                 Tength
                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                    length
          length
                                    length
                                                             length
                                                                                    length
                                                                                                                                                                                                                                                                                                                      length
                                                                                                              length
                                                                                                                                       length
                                                                                                                                                                 length
                                                                                                                                                                                           length
                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HTG 15-JUL-2000
NCE, 33
                     QΥ
                                               뭥
                                                                       Qγ
                                                                                                  В
                                                                                                                         δÃ
                                                                                                                                                     망
                                                                                                                                                                          Q
                                                                                                                                                                                                     Db
                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                        Query Match
Best Local Sim
Matches 239;
                                                                                                  67622
                                                                                                                                                  67562 TCTTAACCAAATGGTGGTGCTGAGTCTCACCAACCAAGGACCCATCATCACCAACAACCG
                                                                                                                                                                                                    67502 GGACTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGAC
                                                                                                                                                                                                                                                    67442 TCTAGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAA 67501
                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                     412 ATCTGCTTACCTTACCGTCCAAGTT 436
                                                                                                                           292
                                                                                                                                                                             232
                                                                                                                                                                                                                            172 GGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGC 231
                                                                                                                                                                                                                                                                           112 TGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAA 171
                                                            TGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGG
                                                                                               CTTCACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAGTTGATCATCCATGA
                                                                                                              CTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGGAGATGATCCATCACAA
                                                                                                                                                                 TCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATGGAGCCCATCATCACCAATGACCG 291
                                               TGTGCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGG
                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                       51456 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                            176150
176250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     161687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           146379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68025
68125
                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L15896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50285
54573
54673
60228
60328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40388
40488
43581
43681
46438
46538
50185
                                                                                                                                                                                                                                                                                                                                                                                            /organism="Mus musculus"
/db_xref="taxon:10090"
/clone="RP21-467L12"
                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .196900
                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="RPCI mouse PAC library 21"
43823 c 44608 g 53666 t 3347 others
                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                    15.1%;
73.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap of unknown contig of 14363 gap of unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gap of contig gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig of
                                                                                                                                                                                                                                                                                                      Score 187.4; DB
Pred. No. 1e-33;
D; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
of 9468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of 9870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown length of 14363 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown length
of 9089 bp in length
unknown length
of 15208 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown length of 10468 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
of 7697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 3093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 10726 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of 8006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 10486 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of 9441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 5555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 4288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 3647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of 4599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
bp in l
                                                                                                                                                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in :
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                        86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                               Length 196900;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                        0
```

Gaps

0

411 67741

67681

67621

```
mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                   repeat_region
                                                                                                                                       repeat_region
                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
/rpt_type=DISPERSED complement(9989. .10077)
                                                                                                                                                                                         complement(8865. .8964)
/note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_type=TANDEM complement(2496. .2878)
                                                   complement(9723. .9882)
/note="L2"
                                                                                                                                                                                                                                                                            complement(8482. .8762)
                                                                                                                                                                                                                                                                                                                           complement(6887. .7067)
/note="L1MD3"
                                                                                                                                                                                                                                                                                                                                                                                                  5542. .5829
/note="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9606"
/chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="BAC-291B3, 3' partial"
/clone_lib="BAC library"
                /rpt_family="LINE/L2"
/rpt_type=DISPERSED
                                                                                                                                                                                                                           /rpt_family="SINE/Alu"
/rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Homo sapiens"
                                                                                   rpt_type=DISPERSED
                                                                                                                   'note="Alusq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  'gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="21-Glutamic Acid Rich protein 21-GARP"
/protein_id="CAB90445.1"
/db_xref="GI:7717370"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poin(<3473. .3565,12649. .12678,15331. .15460,18739. .19157)
//gene_"SH3BGR"</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="(TCCA)n"
/rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="LTR/MaLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="LINE/L1"
                                                                                                     rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                              rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                           rpt_family="LINE/L1"
                                                                                                                                                                                                                                                                                                                                                                rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                    'number=4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="Accession No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        oin(3473. .3565,12649. .12678,15331. .15426)
                                                                                                                                                                         rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AMEGAEGEAEEEETAEGEEPGEDEDS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      translation="GSEKAEEGGETEAQKEGSEDVGNLPEAQEKNEEEGETATEETEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _type=DISPERSED
                                                                                                                                                     _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _type-TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _type-TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          family-"Simple_repeat"
                                                                                                                                          .9424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession No. AF064857"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TCTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TCTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X93498"
 RESULT 9
AC020851
                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                         Db 268693 GGAGCCCAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                            Db 268633 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                              Db 268573 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                    Db 268513 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                     Db 268753 TGCTTACCTTACCGTCCAAGGTGTG 268777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                         415 TGCTTACCTTACCGTCCAAGTTATG 439
                                                                                                                                                          355 GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                295 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT 354
                                                                                                                                                                                                                                                                                                    235 CAGTGACATGGTGGTAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                     175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="SINE/Alu"
/rpt_type=DISPERSED
14013. .14131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(10078. .10429)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(13115. .13425)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(11315. .11556)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(11002. .11282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(10430. .10651)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="LINE/L2"
/rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="Simple_repeat"
/rpt_type=TANDEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="Simple_repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="(CA)n'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note-"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="(TTTA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'rpt_family="LTR/Malk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number=5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpt_family="SINE/Alu"/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="AluSp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note="Alux
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'gene="SH3BGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="SINE/MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="SINE/Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="LINE/L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.7%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type=DISPERSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (13598. .13892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 318.6; DB 9;
Pred. No. 7.3e-65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 340000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                268572
                                                                                                                                                                              414
                                                                                                                                              268752
                                                                                                                                                                                                                268692
                                                                                                                                                                                                                                                                                    268632
```

```
HS21C080
LOCUS
                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                  δĀ
                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ωy
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                   REFERENCE
                                                                                                                     SOURCE
                                                                                                                                    KEYWORDS
                                                                                                                                                     VERSION
                                                                                                                                                                   ACCESSION
                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                     RESULT 8
                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                     44573
                                                                                                                                                                                                                                                                                                                                                    44513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                44453 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44333 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44273 AGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAAAATGCAAGAGTCCTGAAGGG 44332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                   415 TGCTTACCTTACCGTCCAAGTTATG 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                   295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 175 CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235 CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGÇCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                 GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC 414
                                                                                                                                                                                                                                                                                   TGCTTACCTTACCGTCCAAGGTGTG 44597
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321;
Hattori,M., Fujiyama,Å., Taylor,T.D., Watanabe,H., Yada,T. Park,H.S., Toyoda,A., Ishii,K., Totoki,Y., Choi,D.K., Soed Ohki,M., Takagi,T., Sakaki,Y., Taudien,S., Blechschmidt,K.
                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 340000)
                                                                                                                                                  Homo sapiens chromosome 21 segment AL163280 AP001735 BA000005 AL163280.2 GI:7717369
                                                                                                   Homo sapiens
                                                                                                                                                                                                      HS21C080
                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /evidence=not_experimental complement(18643. .24647)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AluSg1"
complement(18004. .18334)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family-"HERV17"
complement(19228. .19361) '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /evidence=not_experimental
complement(18397. .18584)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(18335. .18632)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="MER34"
complement(17633. .17969)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="LTR17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note="Xpound exon prediction, score = 74% (0%)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="MZEF, score = 51.4%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="MZEF, score = 92.8%"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="GRAIL, score = 66.000%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="GRAIL, score = 51.000%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.7%;
98.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family-"HERV17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .21275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 318.6; DB Pred. No. 7e-65;
                                                                                                                                                                                                  340000 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                   DNA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     comment -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   comment = good shadow"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 142742;
                                                                                                                                                                                                  PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Gaps
                 Soeda; E.,
                                                                                                                                                                                                  24-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                 44572
                                                                                                                                                                                                                                                                                                                                                                                                                  44512
                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  44392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
 source
                                                                                                                                  source
                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tokyo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yaspo,M.L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   URL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GBF,
```

Ş

```
Submitted (05-MAY-2000) The Chromosome 21 Mapping and Sequencing Consortium: * RIKEN Genomic Sciences Center, Human Genome Research Group * Institute of Molecular Biotechnology, Genome Analysis * Keio University School of Medicine, Dept. of Molecular Biology * GBF, Dept. of Genome Analysis * Max-Planck Institute for Molecular Genetics (addresses see below)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * URL: http://adenine.dmb.med.keio.ac.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * URL: http://genome.imb-jena.de,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * Institute of Molecular Biotechnology, Geno
Beutenbergstrasse 11, D-07745 Jena, Germany
* e.mail: gscj-submit@genome.imb-jena.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * URL: http://hgp.gsc.riken.go.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sagamihara 228-8555, Japan,
* e.mail: sakaki@gsc.riken.go.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The Chromosome 21 Mapping and Sequencing Consortium consists of * RIKEN Genomic Sciences Center, Human Genome Research Group, *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hornischer, K., Brandt, P., Scharfe, M., Schoen, O., Desario, A., Reichelt, J., Kauer, G., Bloecker, H., Ramser, J., Beck, A., Klages, S., Hennig, S., Riesselmann, L., Dagand, E., Wehrmeyer, S., Borzyn, K., Gardiner, K., Nizetic, D., Francis, F., Lehrach, H., Reinhardt, R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polley, A., Menzel, U., Delabar, J., Kumpf, K., Lehmann, R., Patterson, D., Reichwald, K., Rump, A., Schillhabel, M., Schiudy, A., Zimmermann, W., Rosenthal, A., Kudoh, J., Shibuya, K., Kawasaki, K., Asakawa, S., Shintani, A., Sasaki, T., Nagamine, K., Mitsuyama, S., Antonarakis, S.E., Minoshima, S., Shimizu, N., Nordsiek, G., Antonarakis, S.E., Minoshima, S., Shimizu, N., Nordsiek, G., Antonarakis, S.E., Minoshima, S., Shimizu, N., Nordsiek, G., Minoshima, S., Shimizu, M., Nordsiek, G., Minoshima, S., Shimizu, M., Nordsiek, G., Minoshima, S., Shimizu, M., Minoshima, S., Shimizu, M., Minoshima, M., 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * Mascheroder Weg
info.genome@gbf.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   okyo 160-8582,
e.mail: shimiz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e.mail: info-chr21@molgen.mpg.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Max-Planck Institute for Molecular Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    URL: http://genome.gbf.de/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Keio University School of Medicine, Dept.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ihnestrasse 73, D-14195 Berlin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dept. of Genome Analysis,
heroder Weg 1, D-38124 Braunschweig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           http://chr21.rz-berlin.mpg.de/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /chromosome="21"
/map="21q22.3"
<1. .125946
/note="Accession No. AF121782" 286628. .>340000
                                                                                                                                       /clone="P206A10, 3' partial"
/clone_lib="RPCI1,3-5 PAC lil
                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="p70124"
/clone=lib="RPC11,3-5 PAC library"
/note="Accession No. AF064860"
224137...>340000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           73410. .243533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="P160L9, 5' partial"
/clone_lib="RPCI1,3-5 PAC library"
/note="Accession No. AF121897"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /map="21q22.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
/chromosome="21"
                                                                                                                                                                                                                                                                                                         /chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /chromosome="21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /map="21q22.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              shimizu@dmb-med.keio.ac.jp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ′organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .340000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Japan,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Germany,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Germany, * e.mail:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Molecular Biology, *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Analysis,
```

repeat_region	repeat_region	repeat_region	repeat_region	CACH	D YOU	exon	repeat_region	exon	exon	exon	repeat_region	repeat_region	repeat_region		reneat region	exon	repeat_region	repeat_region	exon	exon	repeat_region	repeat_region		exon	repeat_region	repeat_region
complement(78198220) complement(78198220) /evidence=not_experimental /rpt_family="MLTIJ"	<pre>/rpt_family="LTR16C" complement(75617696) /evidence=not_experimental /rpt_family="MIR"</pre>	/ipt_idmity = Mulic 7347. 7457 /evidence=not_experimental	69017339 /evidence=not_experimental	/note="GenScan, score = 1.83%, frame: 1 phase: 0" /evidence=not_experimental	<pre>/note="MZEF, score = 95.1%" /evidence=not_experimental 6746 6751</pre>	<pre>/evidence=not_experimental /rpt_family="HERVL" 6682.</pre>	<pre>/note="Xpound exon prediction, /evidence=not_experimental 5385 6104</pre>	="GRAIL, score ence=not_exper .4749	<pre>/note="GRAIL, score = 65.000%, /evidence=not_experimental 46744781</pre>	<pre>/evidence=not_experimental /rpt_family="MLT1J" complement(35023540)</pre>		31233478 /evidence=not_experimental	30123122 /evidence=not_experimental /rpt familv="MLT1J"	/evidence-not_experimental /rpt_family-"AluSx"	7	₽ 70	<pre>/evidence=not_experimental /rpt_family="MIR" complement(1780, .2326)</pre>	/hote="GRAIL, SCOIE = 99.000%, /evidence=not_experimental complement(16931741)	_experime	/rpt_family="L2" 15761710 /note="MZEF, score = 66.1%"	1481. 1603 /evidence=not_experimental	<pre>11141403 /evidence=not_experimental /rpt familv="MLT1I"</pre>	/note="GRAIL, score = 86.000%, /evidence=not_experimental	<pre>/evidence=not_experimental /rpt_family="MER58A" /complement/1078 1162)</pre>	/rpt_family="MLT2E" complement(668881)	complement(140415)
			•	<pre>comment = Initial_exon 6 bp. ,</pre>			score = 70% (0%) "	comment = marginal"	comment = good shadow"						comment = good shadow"			Comment = excertenc.				:	comment = excellent shadow"			
repeat																н									re	exon
at_region	h	repeat_region	exon	repeat_region	exon	repeat_region	exon	repeat_region	repeat_region	repeat_region	exon		repeat region	repeat_region	exon	repeat_region	repeat_region	repeat_region	repeat_region		repeat_region	exon		PXOD	repeat_region	on

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
 밁
                             Q
                                                                                               Q
                                                                                                                                                                QY
                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                          Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           рь
                                                                    엉
                                                                                                                                    В
                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX380404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Sin
Matches 702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
   529
                                                                                                                                                                                                                                                                                                                                                                                                          169
                                                                                                                                                                                                                                                                                                                                                                                                                                             175
                                                                    469
                                                                                                    475
                                                                                                                                     409
                                                                                                                                                                       415
                                                                                                                                                                                                      349
                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                        289
                                                                                                                                                                                                                                                                                                         295
                                                                                                                                                                                                                                                                                                                                         229
                                                                                                                                                                                                                                                                                                                                                                        235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           115 AGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGG 174
TATTTCCTGGGAGCTTGAGGTTCCCGTAAGCCATTCGAGTTACAATTCCTTTCTGGAGCC
                                                                                                                                                                                                                      GGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTCT
                               TATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTTTTCCCGGAGCC
                                                                                      CGCTGAGAATGAACCTTGTGAAGTTACCTTGTCTACCCTCACACTGGACCCGGCTCCCGGA
                                                                                                                                                                                                   GCAGCCCAGTGACTCGGGATCCGTGCAATGCAGCCTGCAGAACAGCCATGGGTTTGGATC
                                                                                                                                                                                                                                                                        CACCTATGCCAGTTACAACAGCACTGACAGCTTCATCTCGGAAGTTGATCCATGATGT
                                                                                                                                                                                                                                                                                                      CACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGT
                                                                                                                                                                                                                                                                                                                                         TAACCAAATGGTGGTGCTGAGTCTCACCACCCAAGGACCCATCATCACCAACAACCGCTT
                                                                                                                                                                                                                                                                                                                                                                        CAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCCATCATCACCAATGACCGCTT
                                                                                                                                                                                                                                                                                                                                                                                                          CTCAGAGGCTCACTTCAACTGCACCGTGACTCACGGCTGGAAGCTTCTCATGTGGACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTTCCGGATCCAGTTATCAGATCATAGAAGGTCCTCAGAATGTAACAGTCCTAAAGGA 168
                                                                 CACTGAGGGTGAACCCTGTAATGTGACTTGCTATGCCGTGGGCTGGACCTCACTCCCGGA
                                                                                                                                  TGCCTTCCTCAGTGCAAGTCATGGGGGACCCTGAACATTCCTAGCAACAACCTTATAGT
                                                                                                                                                                   TGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 9 from Patent W00200710
AX380404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B7-like molecules and uses thereof Patent: WO 0200710-A 9 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amgen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher, A.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX380404.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MEGSWRDVLAVLVILAQLTASGSSYQ1IEGPQNVTVLKDSEAHF
MCTVTHGWKLLAWTLKQMVVLSLTTQGFIITNNRFTYASYNSTDSFISELIIHDVQPS
DSGSVQCSLQNSHGFGSAFLSVQVMGTLNIPSUNLIVTEGPCNVTCYAVGWTSLDDI
SWELEVPVSHSSYNSFLEFGNEWRVLSVLDLTPLGNGTLTCVAELKDLQASKSLTVNL
TVVQPPPDSIGEEGPALPTWAIILLAVAFSLLLIIYLIIFCCCCASRREKEESTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QNEIRKSANMRTNKADPETKLKSGKENYGYSSDEAKAAQTASLPPKSAEVSLPEKRSS
SLPYQELNKHQPGPATHPRVSFDIASPQKVRNVTLV"
1 304 c 291 g 287 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /protein_id="CAD28220.1"
/db_xref="GI:19575335"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:19575334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sarmiento, U.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 380.6; DB 6; Pred. No. 1.1e-79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               291 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schultz, H.J. and Chute, H.T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1195;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                   474
588
                                 594
                                                                  528
                                                                                                                                    468
                                                                                                                                                                                                     408
                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                          228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4;
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
AF121782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭥
                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1195
                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAGAAACAGTAGCTGTGGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCG 894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCAACTTTATGAGGGTCTTGAGTGTCCTGGACCTCACACCACTGGGCAACGGGACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACATCGCCAGTCCTCAGAAGGTCAGAAATGTGACTTTAGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATA 1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGCAAACATGAGGACAA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAGAGAAACAAAGAAACTGAGACAGA 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----TTGTGCCTCCAGGAGAAAAGGAAGAATCTACTTATCAAAATGAAATAAGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCCTTGCTCTTGATCCTGATCATTGTTTTGATTATATATTCTGTTGCTG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTGGTTCAGCCTCCACCTGACAGTATTGGAGAGGA------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGATTCGGTGTCCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTTGTGTGGCAGAGCTGAAGGACTTGCAGGCCAAGTCCTTAACTGTCAACCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTTATCAGGAACTCAATAAACATCAGCCCGGTCCAGCAACTCATCCACGGGTTTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTCCCTCCTAAATCTGCTGAAGTCAGCCTTCCAGAAAAACGCAGCAGTA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGTGGAAAGGAAAACTACGGGTACAGTTCGGATGAGGCCAAAGGCTGCACAGACTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTTGTGGCTGCAACTGCTGCTGCCGTTGTTTCTTGCTGTAGAAGAAAAAGAGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens chromosome 21q22.3 PAC AF121782
                                                                                                                                                                                 Submitted (21-JAN-1999) Genome Analysis, Institute for Molecular Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany
                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 142742)
Taudien,S., Dagand,E., Hildmann,T., Nordsiek,G., Drescher,B., Schattevoy,R., Weber,J., Schilling,M., Menzel,U., Yaspo,M.L. and
                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                         Rosenthal, A.
                                                                                                                                                                                                                                                                                                                                                                                                          AF121782.1 GI:4210991
                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="21"
/map="21q22.3"
/evidence=not_experimental
/rpt_family="MIR"
                                                                                                                                                                  Location/Qualifiers
                                                    /clone="PAC 206A10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -AGGCCCAGCACTGCCGACCTGGGCCATCATCCTGCTGGCAGTGGCCTT 792
                                                                                                                                                  .142742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             - ACAAAGCAGATCCGGAGACAAAGTTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                               206A10, complete sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 02-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            843
```

Query Match 85.8%; Score 1064; DB 6; Length 1139; Best Local Similarity 97.2%; Pred. No. 5.4e-242; Matches 1102; Conservative 0; Mismatches 10; Indels 22; Gaps 1; Oy 106 AGAAGCTGTAGGTTCTGGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165	/or 1. 1. /no /co /co /po /db /db /dt /tr /tr /tr /un SIQ SIQ SIQ OTG NCC DTG OTG OTG OTG OTG OTG OTG OTG OTG OTG O	AX380402 AX380402 DEFINITION Sequence 7 from Patent WO0200710. ACCESSION AX380402 VERSION KEYWORDS SOURCE ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. REFERENCE AUTHORS FORMANIAL AUTHORS Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T. FOURNAL Bratent: WO 0200710-A 7 03-JAN-2002; Amgen, Inc. (US) FEATURES SOURCE Location/Qualifiers SOURCE Location/Qualifiers	Db 694 ATTATCAAGTTTACCGAGTTTAGGTTTTCATTCCCTACTTGGGGCAAAGTTGGACTTGG 753 Qy 826 ACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGG 885
Qy 1126 CTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACGAGGCCAGGCAAGTCATCCACA 1185	Qy 886 CCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTTCTCTCTGAAGAAA 945	646 TGGGACTTGGCTGCTGCTGCTGCTGCAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT [Qy 166 CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGCCCCCAAAATGCAAGAGT 86 Qy 166 CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGTCATCAT 225

```
DEFINITION
ACCESSION
                                                                                            RESULT 4
AX380398
                     SOURCE
ORGANISM
                                                                                                                                        밁
                                                                                                                                                      õ
                                                                                                                                                                                DЪ
                                                                                                                                                                                                 õ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                 Ър
                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                          KEYWORDS
                                                      VERSION
                                                                                    Locus
                                                                                                                                        1131
                                                                                                                                                            1196
                                                                                                                                                                                 1071
                                                                                                                                                                                                     1136
                                                                                                                                                                                                                                              1076
                                                                                                                                                                                                                          1011
                                                                                                                                                                                                                                                                                       1016
                                                                                                                                                                                                                                                                   951
                                                                                                                                                                                                                                                                                                            891
                                                                                                                                                                                                                                                                                                                                956
                                                                                                                                                                                                                                                                                                                                                     831
                                                                                                                                                                                                                                                                                                                                                                         896
                                                                                                                                                                                                                                                                                                                                                                                                                836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     476
                                                                                                                                                                                                                                                                                                                                                                                            771
                                                                                                                                                                                                                                                                                                                                                                                                                                     711
                                                                                                                                                                                                                                                                                                                                                                                                                                                         776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      356
                                                                                                                                   AATCTGGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                                                                                                                                                                   CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCT 1135
                                                                                                                                                                                                                                                                                                                                                CCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACAGGCTTCTTT
                                                                                                                                                                                         CCTCACCAGCGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACCAGGCTTTTT 1195
                                                                                                                                                                                                                                                                           AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCT
                                                                                                                                                                                                                                                                                                          CGTATTCAATTTCAAAAGAAATCTGAAAAAGAGAAGAAGAACAAAGAAACTGAGAAAAA
                                                                                                                                                                                                                                                                                                                  TTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTTCCTGGGACCTCGCTCTCGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCCGGCTCCCGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCT
                                                                                                                                                                                                                        CTCCCTCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCT
                                                                                                                                                                                                                                                                AGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGACACCGCTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                  TTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTCCTGGGAGCTCGGTCTCGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTC
Homo sapiens
Eukaryota; Me
Mammalia; Eut
                                                  AX380398
Sequence 3 1
AX380398
AX380398.1
                              human.
 ; Metazoa;
Eutheria;
                                                                       from
                                                   GI:19575328
                                                                       1168 bp
Patent W00200710.
Chordata;
Primates;
Craniata; Vi
Catarrhini;
                                                                                  DNA
Vertebrata;
i; Hominidae;
                                                                                  linear
         Euteleostomi;
                                                                                  PAT
                                                                                  18-MAR-2002
                                                                                                                                                                               1130
                                                                                                                                                                                                                        1070
                                                                                                                                                                                                                                                                1010
                                                                                                                                                                                                                                                                                     1075
                                                                                                                                                                                                                                                                                                         950
                                                                                                                                                                                                                                                                                                                              1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     415
                                                                                                                                                                                                                                                                                                                                                                      955
                                                                                                                                                                                                                                                                                                                                                                                                               895
                                                                                                                                                                                                                                                                                                                                                                                                                                                      835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       410
                                                                                                                                                                                                                                                                                                                                                   890
                                                                                                                                                                                                                                                                                                                                                                                           830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                350
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE
δÃ
                           뫄
                                                  Ωy
                                                                               Вb
                                                                                                       Qy
                                                                                                                                      뫄
                                                                                                                                                               δÃ
                                                                                                                                                                                            Db
                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                       δÕ
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                      Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                            634
                                                                                                             646
                                                                                  574
                                                                                                                                       514
                                                                                                                                                                  586
                                                                                                                                                                                              454
                                                                                                                                                                                                                         526
                                                        706
                                                                                                                                                                                                                                                    394
                                                                                                                                                                                                                                                                              466
                                                                                                                                                                                                                                                                                                          334
                                                                                                                                                                                                                                                                                                                                     406
                                                                                                                                                                                                                                                                                                                                                                 274
                                                                                                                                                                                                                                                                                                                                                                                         346
                                                                                                                                                                                                                                                                                                                                                                                                                       214
 766
                                                                                                                                                                                                                                                                                                                                                                                                                                                286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106 AGAAGCTGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
nes 1125; Conserv
                                                                                                                                                                                           CCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCT 405
                                                                                                TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                    ATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCCAAAGTTGGACTTGG
                                         AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                                                                                                                                                                                  TCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACACCTGACACTGGACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA
                            AAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGT
                                                                                  TGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                       TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                 TGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGAAGGGCTCCCAGGCTCGCATCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Welcher, A.A., Sarmiento, U.M., Schul
B7-like molecules and uses thereof
Patent: WO 020710-A 3 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="Cad28217.1"
/db_xref="GI:19575329"
/db_xref="GI:19575329"
/translation="myagamenrdppgsgsgnevlegdbnarvlkgsgarfnctvsgg
wklimmalsdmvvlsvrpmepiltndretsgrvdoggsbetsemiihnvedssdsnirc
slonsrlhgsatifvgvmgelfipsvmlvyaemepcevtclpshmfwlpdiswelgll
vshssyyfvpedsdfosavsilaltpgsngttltqvafwslikarksatvnltvlrdrcpg
DTggginipgvlsslpslgeslptwgkyglglagtmltfptcTltirccccrrrccg
DTGgGINIPGVLSSLPSLGFSLDTWGKVGLGLAGTMLLTPTCTLTIRCpg
DTGGCCCCCCCCRRRCGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PKSCESSDÞEQRNSSCGÞÞHQRADQRÞÞRÞASHÞQASFNLASÞEKVSNTTVV"
1 302 c 288 g 279 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="unnamed protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     90.2%;
99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sarmiento, U.M., Schultz, H.J. and Chute, H.T. _{\rm 1} and uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1119; Di
Pred. No. 4.7e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1119; DB 6;
No. 4.7e-255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                        585
                                                                                                                                                                                                                                                                                                                                                                                                                                                345
 825
                            693
                                                      765
                                                                                  633
                                                                                                            705
                                                                                                                                       573
                                                                                                                                                                 645
                                                                                                                                                                                              513
                                                                                                                                                                                                                                                    453
                                                                                                                                                                                                                                                                              525
                                                                                                                                                                                                                                                                                                          393
                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                153
                                                                                                                                                                                                                                                                                                                                                                                                                      273
```

```
δÃ
                                                                                                        밁
                                                                                                                                   δõ
                                                                                                                                                                    밁
                                                                                                                                                                                               ΩV
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
               945
                                                                                                        912
                                                                                                                                                                     852
                                                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                      672
                                                                                                                                                                                                                                                                                                                                                                                    585
                                                                                                                                                                                                                                                                                                                                                                                                                 612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105
                                                                                                                                                                                                  765
                                                                                                                                                                                                                                 792
                                                                                                                                                                                                                                                              705
                                                                                                                                                                                                                                                                                          732
                                                                                                                                                                                                                                                                                                                                                                                                                                             525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGTGGTGGACGGTTCTGGGTATGGAAGTCATAGAAGGCCCCCAGAATGCAACAG 251
GCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAA
                                                             GCCGCCGTCGTTGTTGTGGCTGCAACTGCTGCTGCTGCTTGTTTCTTCTGCTGTAGAAGAA 944
                                                                                                        GACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCT
                                                                                                                         GACTAGCAGGCACCATGCTTCTGACGCCGACGTGTACTTTACAATACGCTGCTGCTGCT
                                                                                                                                                                    TATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTG
                                                                                                                                                                                  TATTATCAAGTTTACCGAGTTTAGGTTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTG
                                                                                                                                                                                                                                 TAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTG
                                                                                                                                                                                                                                              TAAATCTCACTGTGATTCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTG
                                                                                                                                                                                                                                                                                                        ATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTG
                                                                                                                                                                                                                                                                                                                                                     ATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCC 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCATGGATCTGCTTACCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTA 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCC 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCA 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGACCGCTTCACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTGGGCTCTCAGTGACATGGTGGTGCTAAGCGTCAGGCCCCATGGAGCCCCATCATCACCA 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGAAGGGCTCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCA 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGAAGCTGTAGGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAG 164
                                                                                                                                                                                                                                                                                          ATGGGACTTTGACTTGCGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTG
                                                                                                                                                                                                                                                                                                                                                                                   TTCCGGAGCCCAGCGACCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCA 644
                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCTCCCGGATATTTCCTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTG 584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCATGGATCTGCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCACAATGTGGAGCCCAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCTTGTAGTCGCTGAGAATGAACCTTGTGAAGTTACTTGTCTACCCTCACACTGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="PLACE6017788"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="placenta"
/clone_lib="PLACE6"
/note="cloning vector: pME18SFL3"
463 c 474 g 534 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 1126.4; DB 9; Pred. No. 8.4e-257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 2051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            344
                                                                                                         . 971
                                                                                                                                      884
                                                                                                                                                                    911
                                                                                                                                                                                                  824
                                                                                                                                                                                                                                 851
                                                                                                                                                                                                                                                                                                                                                      731
                                                                                                                                                                                                                                                                                                                                                                                                                  671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          371
                                                                                                                                                                                                                                                                                          791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

```
δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
맜
                         Qy
                                                         B
                                                                                       Qy
                                                                                                                        뫄
                                                                                                                                                                                 рь
                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                             Matches 1124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                            171
                                                                                                                        111
                                                                                                                                                                                                                 116
 231
                              296
                                                                                                                                                                                  51
                                                                                                                                                                                 GGTTCTGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGC 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGAGACAGAAAGTGGAAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAG
                                                                                                                        TCCCAGGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC
                                                                                                                                      TCCCAGGCTCGCTTCAACTGCACCGTCTCCCCAGGGCTGGAAGCTCATCATGTGGGCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                              ACCTCTCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTG
                                                            AGTGACATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTC
                                                                          AGTGACATGGTGGTGGTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCTGTGGCCCTCCTCACCAGCGGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAACCGCTTCTCTCCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1 from Patent W00200710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Welcher, A.A., Sarmiento, U.M., Schultz, H.J. and Chute, H.T. B7-like molecules and uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX380396.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent: WO 0200710-A 1 03-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B7-like molecules and
                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inc.
                                                                                                                                                                                                                                                                                                                      /translation="MGLVIFLHGSGSGNEVIEGPQNATVLKGSQARFNCTVSQGWKLI WALLSDMVVLKYRPMEPITTNDRFTSQRYDGGGNFTSEMIIHNUFPSDSGNIRCSLQN SRLHGSAYLTVQVMGELFIPSVBLVVAENEPCEVTCLP$HWTRLPDISWELGLLVSHS SYYFVPEDPSDLQSAVSILALTPQSNGTLTCVATWKSLKARKSATVNLTYIRCPQDTGG GINIPGVLSSLPSLGFESLPTWGKVGLGLAGTMLLTPTCTLTIRCCCCRRRCCGCCCC RCCCCCRRKRGFRIQFQKKSEKEKTNKETETESGNENSGYNSDEQKTTDTASLPPKSC ESSDPEQRNSSCCPPHGRADQRPFPASHPQASFNLASPEKVSNTTVV" 307 c 286 g 287 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
27. .1175
                                                                                                                                                                                                                                                                                                                                                                                                                                           /protein_id="CAD28216.1"
/db_xref="GI:19575327"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:19575326
                                                                                                                                                                                                                                                             90.6%;
                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                             Score 1123.4; DB 6; Pred. No. 4.3e-256;
                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear ·
                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-MAR-2002
                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1064
                                                                                                                        170
                                                                                                                                                      235
 290
                              355
                                                            230
                                                                                          295
                                                                                                                                                                                                                                                0;
```

.

```
Š
                                     В
                                                            Š
                                                                                              В
                                                                                                                            Ş
                                                                                                                                                           В
                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches 1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                     661
                                                                 661
                                                                                                601
                                                                                                                                                           541
                                                                                                                                                                                          541
                                                                                                                             601
                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 AGGTGTGAGTCCAGCCAACAGTGTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCAT 60
TCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTCCAGGTGTATTATCAAGTTTACC
                                               CGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGAT
                                                                                                                                                                                                                 CCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTG
                                                                                                                                                    CTGGGAGCTCGGTCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGA
                                                                                                                                                                     CTGGGAGCTCGGTCTCCTGGTCAGCCATTCAAGCTATTATTTTGTTCCGGAGCCCAGCGA
                                                                                                                                                                                                                                                                                              CCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCAGTGTTAATCTTGTAGTCGCTGA 480
                                                                                                                                                                                                                                                                                                                                        CAGTGATTCGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTA
                                                                                                                                                                                                                                                                                                                                                                      CAGTGATTCGGGGGAACATCAGATGCAGCCTCCAGAACAGTCGCCTGCATGGATCTGCTTA
                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGAGGTACGACCAGGGCGGAACTTCACCTCGGAGATGATCATCCACCAATGTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGGTGGTGCTAAGCGTCAGGCCCATGGAGCCCATCATCACCAATGACCGCTTCACCTC 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGGTGTAGGTTC 120
                             CGTGGCTACCTGGAAGAGCCTGAAGGCCCGCAAGTCTGCAACTGTAAATCTCACTGTGAT
                                                                                           CCTTCAAAGTGCAGTGAGCATCCTGGCTCTGACCCCACAGAGCAATGGGACTTTGACTTG
                                                                                                                                                                                                                                                                             CCTTACCGTCCAAGTTATGGGAGAGCTGTTCATTCCCCAGTGTTAATCTTGTAGTCGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                      TCAGAGGTACGACCAGGGCGGGAACTTCACCTCGGAGATGATCATCCACAATGTGGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCTCGCTTCAACTGCACCGTCTCCCAGGGCTGGAAGCTCATCATGTGGGCTCTCAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGTCTGGTAATGAAGTCATAGAAGGCCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGTCTGGTAATGAAGTCATAGAAGGCCCCCAGAATGCAACAGTCCTGAAGGGCTCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACCTGGTGGCTTAGAACAATGGAAAGGCATTTGCTCACGGTTCCAGAAGCTGTAGGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGTGTGAGTCCAGCCAACAGTGTGGATCAGTTTCCTAGGCTGCCATAACAAAGCACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MERHLLTVPEAVGSGSGNEVIEGPONATVLKGSQARFNCTVSQG
#KLIMMALSDMYVLSVRPMEPIITNDRFTSQRXDGGONETSEMIIHNVEPSDSGNIRG
SLQNSRLHGSAVLTVQVMGELFIFSVULVVABENEPCEVTCLPSHWTRLDPISWELGLL
VSHSSYYFYPEPSDLQSAVSILALTPOSNGTLTQVATWKSLKARKSATVNLTVLRCPP)
DTGGGINIPGVLSSLPSLGFSLPTWGKYGLGLAGTMLLTPTCTLTIRCCCCRRRCCGG
NCCCRCCFCCRRRGFRIDFOKKSEKEXTNKETETESGNENSGYNSDEQKTTETASLP
PKSCESSDPEQRNSSCCPPHQRANDRPFRPASHPQASFNLASPEKVSNTTVV"
a 319 c 305 g 298 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="CAD28218.1"
/db_xref="GI:19575331"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref=".taxon:9606"
80. .1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism⇔"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1240; DB 6;
Pred. No. 8.7e-284;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                   600
                               720
                                                                                         660
                                                                                                                        660
                                                                                                                                                      600
                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
RESULT 2
AK092516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         οy
                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вþ
                                                                                                                                                                                                                                                                                                                                   COCUS
                                                                                                                                                                              ORGANISM
                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1021
                                                                                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721 TCGGTGTCCCCAAGACACTGGAGGTGGTATTAATATTTCCAGGTGTATTATCAAGTTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCGGCTGATCAACGTCCACCCAGGCCAGCAAGTCATCCACCAGGCTTCTTTAATCT 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCCAAATCCTGTGAATCCAGTGATCCTGAACAAAGAAACAGTAGCTGTGGCCCTCCTCA 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATGAAAACTCCGGGCTACAATTCAGATGAACAAAAGACCACAGAAAACCGCTTCTCTCCC 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCTGCAACTGCTGCTGCCGTTGTTGTTTCTGCTGTAGAAGAAAAAAAGAGGATTTCGTAT 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCAGTCCTGAGAAGGTCAGTAATACAACTGTAGTATAG 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCGGGCTGATCAACGTCCACCCAGGCCAGGCAAGTCATCCACAGGCTTCTTTTAATCT 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAATGAAAACTCCGGCTACAATTCAGATGAACAAAAGACCACAGAAACCGCTTCTCTCCC 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCTGCAACTGCTGCTGCTGTTGTTTCTGCTGTAGAAGAAAAAGAGGATTTCGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCCGCCGTCGTTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTCTGACGCCGACGTGTACTCTTACAATACGCTGCTGCTGCTGCTGCCGCCGTCGTTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGTTTAGGTTTTCATTGCCTACTTGGGGCAAAGTTGGACTTGGACTAGCAGGCACCAT 840
Kawakami,B., Sugiyama,A., Takemoto,M., Sugiyama,T., Irie,R., Otsuki,T., Sato,H., Wakamatsu,A., Ishii,S., Yamamoto,J., Isono Kawai-Hio,Y., Saito,K., Nishikawa,T., Kimura,K., Yamashita,H., Matsuo,K., Nakamura,Y., Sekine,M., Kikuchi,H., Kanda,K., Wagatsuma,M., Murakawa,K., Kanehori,K., Takahashi-Fujii,A., Oshima,A., Suzuki,Y., Sugano,S., Nagahari,K., Masuho,Y., Nagai
                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                            oligo capping; fis (full insert sequence).
Homo sapiens placenta cDNA to mRNA, clone_lib:PLACE6
                                                                                                                                                                                                                                                                                        Homo sapiens cDNA FLJ35197 fis, to IGSF5.
                                                                                                                                                                                                clone:PLACE6017788
                                                                                                                                                                                                                                                        AK092516.1
                                                                                                                                                                                                                                                                              AK092516
                                                                                                                                       Mammalia; Eutheria;
                                                                                                                                                            Eukaryota;
                                                                                                                                                      Metazoa;
                                                                                                                                                                                                                                                      GI:21751130
                                                                                                                                       Chordata;
Primates;
                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                             clone
                                                                                                                                                                                                                                                                                               mRNA IIIICUI.
One PLACE6017788,
                                                                                                                                                                                                                                                                                                       PRI 15-JUL-2002
highly similar
                                                                             Isono,Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
```

TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL

(bases 1 to 2051)
[sogai,T. and Yamamoto,J.

Unpublished

Isogai,T

human cDNA sequencing project

COMMENT

Direct Submission

Direct Submission

Submitted (04-JUL-2002) Takao Isogai, FLJ Project(HRI Team); 2:6-7

Kazusa-Kamatari, Kisarazu, Chiba 292-0812, Japan

(E-mail:genomics@fri.co.jp, Tel:81-438-52-3975, Fax:81-438-52-3986)

NEDO human cDNA sequencing project supported by Ministry of Economy, Trade and Industry of Japan; cDNA full insert sequencing: Research Association for Biotechnology (RAB); cDNA library construction: Helix Research Institute (HRI) (supported by Japan Key Technology Center etc.); 5'-& 3'-end one pass sequencing: RAB, HRI, and Biotechnology Center, National Institute of Technology and Evaluation; clone selection for full insert sequencing: HRI and RAB; annotation: HRI and RAB.

```
OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       April 28, 2003, 23:25:03; Search time 3424.45 Seconds (without alignments) 10538.186 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2054640 segs, 14551402878 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 aggtgtgagtccagccaaca.....gtaatacaactgtagtatag 1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-729-264-5
1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.4_p5_4578 Copyright (c) 1993 - 2003 Compugen Ltd.
em_htgo_hum:*
em_htgo_mus:*
em_htgo_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_pr:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_pat:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_ov:*
                                                                       em_htg_pln:*
em_htg_rod:*
em_htg_mam:*
                                                                                                                                                                                                                              em_pat:*
em_ph:*
em_pl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                gb_ro:*
gb_sts:*
                                                                                                                                                                                                                                                                                      em_om:*
                                                                                                                                                                                                                                                                                                                                                                                        gb_un:*
                                                                                                                                                                                                                                                                                                                                                                                                                    gb_sy:*
                                                                                                                                              em_htg_hum:*
em_htg_inv:*
                                                                                                                                                                                         em_un:*
                                                                                                                                                                                                    em_sts:*
                                                                                                                                                                                                                  em_ro:*
                                                                                                                                                                                                                                                                            em_ov:*
                                                                                                                                                                                                                                                                                                                  em_mu:*
                                                                                                                                                                                                                                                                                                                                 em_in:*
                                                                                                                                                                                                                                                                                                                                              em_hum:*
                                                                                                                                                                                                                                                                                                                                                          em_fun:*
                                                                                                                                                                                                                                                                                                                                                                            em_ba:*
                                                           em_htg_vrt:*
                                                                                                                   em_htg_mus:*
                                                                                                                               em_htg_other:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4109280
```

Pred. No. is the number of results predicted by chance to have a

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL	RESULT 1 AX380400 LOCUS DEFINITION ACCESSION VERSION KEYWORDS		C 42 C 44 45	c 39 c 40 41	C 37			c 29		c 24 c 25			c 17	0 13 15	111		76		32+ 11	Result No.
	AXXX		52.6 52.4	$\sim \sim \sim$	25.	υς υς υς υς υς υς υς υς υς υς υς υς υς υ	57 55 5 50 50 6	54.2	ភបាបា ភបាបា	55.2	50. 50. 50.	58. 58. 2	58.4	1/6.4 119 119	185.6	~ ~ _	1	-	126.4	·
sag Yot lia lia er,	AX380400 Sequence 5 AX380400 AX380400.1		4.22			4.4.4 			4.4		лб.	.7	. 7	.007		5.1	5.7	90.2 85.8		ery
Met Meth Euth A., lecu	from GI:1		143501 146836 44768 166357	166249 185404 341319	178052 138685	206187 73925 164239	63692 160541	138000 157743	$\begin{array}{c} 1061 \\ 123576 \\ 206059 \end{array}$	205933	427	186968 175861	143266	40205 170121	1556 1556	340000 196900	$1195 \\ 142742$	1168 1139	2051	Length
a; a; mie ar	Patent 957533		وووو	ωωω	22	๑ผม	200	၁ လ ဖ	N G G	291	v 0 1	งงง	000	9000	10 6	N N 4	96	ი ი	000	1 15
azoa; Chordata; Craniata; Vertebreria; Primates; Catarrhini; Homin Sarmiento,U.M., Schultz,H.J. and les and uses thereof 0710-A 5 03-JAN-2002;	1240 bp DNA 1 WOO200710.	ALIGNMENTS	AC104383 AC019317 AL589649 AC091559												806		82	98		
brata; Euteleostomi; inidae; Homo. d Chute,H.T.	inear PAT 18-MAR-2002		AC194383 HOMO SAPI AC19317 HOMO SAPI AL589649 Human DNA AC091559 HOMO SAPI	AC093302 Drosophil AC104703 Drosophil AE003536 Drosophil	rosc	ACO21172 Homo sapi APO05626 Homo sapi ACO16074 Homo sapi	omo	omo sap omo sap	AC015969 Homo sapi AC127383 Homo sapi	omo sap us musc	omo s	rs i	99	AF064860 Homo sapi	i i i i	AL163280 HOMO Sapi ACO20851 Mus muscu AX380408 Sequence	ğ	quenc	mo sa	

```
Search completed: April 29, 2003, 10:51:03 Job time: 125.912 secs
                                                                                     밁
                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: unknown; MOLECULE TYPE: cDNA US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: NEW YOLK
COUNTRY: U.S.A.
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/185,432
FILING DATE: 21-JAN-1994
CLASSIFICATION S 530
ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 7326-006
TELECOMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELEPAX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 371 has pairs
                                                                                                                                                                                                                                                  Query Match 3.3%;
Best Local Similarity 66.3%;
Matches 59; Conservative (
                                                                                   1957 GCTGTTGCTGCGCGGATGCAGTGGTAAT 1985
                                                                                                                                                                TITLE OF INVENTION: DE
TITLE OF INVENTION: AN
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 1155 Av
CITY: New York
STATE: New York
                                                                                                                                                                                           873 GCTGCTGCTGCCGCCGCCGTTGTTGTGGCTGCCAACTGCTGCTGCTGCTTGTTTCT 932
                                                                                                                           933 GCTGTAGAAGAAAAAGAGGATTTCGTATT 961
                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 3771 base pairs TYPE: nucleic acid STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: PENNIE & EDMONDS
1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DELTEX PROTEINS, NUCLEIC ACIDS, AND ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS 23

 Mismatches

                                                                                                                                                                                                                                                                        Score 41; DB 1; Length 3771; Pred. No. 0.1;
                                                                                                                                                                                                                                                    30;
                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                      0;
```